DOCUMENT RESUME

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ABSTRACT
                 The curriculum guide was developed for training
administrators (new entrants and incumbents), at the college level,
in Emergency Medical Services (EMS) program administration. It is
designed to be comprehensive and to include all knowledge and skills
needed to perform the functions and tasks involved in EMS
administration and management. The brief first section provides
background information on prototype EMS curriculum development. In
addition information on the evolution of program design goals, a
definition of the training program requirements, and functions and
tasks in EMS administration (program planning, implementation, and
coordination and evaluation) are discussed. The major section (150
pages) contains the prototype curriculum, presented in 21 curriculum
components (each containing several units), grouped into six modules:
(1) government and health care, (2) human relations and
communications, (3) administration: theory and principles, (4) EMS
delivery: dimension and status, (5) EMS delivery systems, and (6) EMS
program administration. Provided for each module are: a diagram of
the module's scope and the availability of existing programs at the
university level, the number of components and instructional units, a
brief description of the objectives of the module, references keyed
to specific units, and content outlines for each unit of each
component. (Author/BP)

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emergency medical services program administration prototype curriculum

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INTRODUCTION TO CURRICULUM GUIDE

This document is the first volume of a three-part curriculum package developed for training in EMS program administration. The other volumes are a Program Guide and a six-book Resource Materials document.

Purpose

The Curriculum Guide is designed to provide a description of the curriculum at a level of detail sufficient for most program planning purposes, short of actually teaching the recommended contents. In particular, the purposes of the Curriculum Guide are:

- To describe the prototype curriculum developed for EMS program administration including a) the organization, overall structure and scope of the curriculum, and b) its content, objectives and suggested methods of instruction, in summary form.

- To define the rationale for the design of the prototype curriculum, including a) identified needs for this kind of program, b) the program design goals established for the curriculum, and c) the assumptions underlying design characteristics.

- To direct those interested in more detailed curriculum content to appropriate sections of the Resource Materials document.

The Curriculum Guide should be the first volume of the curriculum package to be read. It is both a companion and prerequisite document for the Program Guide and Resource Materials document of the curriculum package.

Organization and Content

The remaining sections of the Curriculum Guide consist of 1) background information to the prototype curriculum development, and 2) a description of the prototype curriculum. The background section includes information on the evolution of the program design goals, definition of the training program requirements and design assumptions. It should establish an appropriate context for understanding the prototype curriculum. The final sections describe the curriculum, first in a general manner and, finally, in systematic, detailed outlines of individual instructional units, organized into content clusters or curriculum components, which are in turn combined into six modules of the prototype curriculum.

BACKGROUND OF PROTOTYPE CURRICULUM

Introduction

The expansion of the State EMS programs (in response to Federal requirements and pressures) is creating many new administrative positions at the community and regional levels that are directly involved in the development, operations and evaluation of improved emergency medical services systems.

The administration of State EMS programs involves planning, implementing, directing and coordinating the development and operation of upgraded, integrated and regionalized EMS systems across each State. The planning function includes both research to determine current status, identify requirements and establish priorities, and documentation to present research findings and programs for upgrading and coordinating services. Implementation includes the activities of establishing a program organization, specifying system requirements, consulting with and assisting local communities to improve EMS, training, certifying and licensing personnel, educating the public about the need and acceptable standards for EMS, and preparing proposals and applications for grants to upgrade and develop EMS. The direction and coordination functions include managing a State's program office, coordinating and assisting in the development of EMS systems and system components, monitoring and evaluating EMS developments and status throughout a State, and supporting and evaluating special R&D projects.

The specific tasks performed by EMS administrators vary as a result of differences in EMS program organization, the degrees of implementation and features of program plans and the characteristics and available EMS resources of each State. Further, EMS program administration takes place in and is directly affected by a complex governmental, social, political and economic environment. An individual administrator's ability to perform effectively depends on his knowledge of this environment and on how well he understands its many and varied interacting forces and interests. To perform at all, he needs certain technical knowledge of emergency medical services, and of research and management methods and skills. His success in applying his technical expertise to EMS problems in a particular environment depends on his ability to communicate effectively with all kinds of people in a community and provide the leadership and organization to enlist their support in a concerted effort to establish improved and coordinated EMS systems.

Recruits for positions in EMS program administration have been drawn from nursing, medical and other allied health professions; other local, State

and Federal government agencies and programs (such as health and welfare, safety, civil defense, planning, etc.); the military services; and civilian emergency services. But even recruits experienced in emergency health services report a need to acquire new knowledge and skills in order to respond most effectively to the novel and complex responsibilities of EMS program administration.

Training Program Design Goals

NHTSA awarded a contract to Dunlap and Associates, Inc. (contract No. DOT-HS-099-3-761) for "Development of a Training Program in EMS Administration," that was initially conceived as a graduate-level program. But a survey of current EMS administrators, conducted at the start of the project, revealed that it would be inappropriate to produce a training program for only qualified students at one particular type of institution, e.g., graduate school. There was clearly a requirement to train individuals with a diversity of employment and educational backgrounds, in a variety of educational settings, and for differing levels of responsibility in EMS administration. Consequently, NHTSA agreed that a comprehensive training package in EMS administration would be designed initially as a non-degree related professional training program. However, it was also agreed that the program would be so constructed that it could be incorporated subsequently in full-time, part-time or non-traditional degree programs, or that graduates of the program could at least earn credits toward a degree from an accredited institution of higher learning.

The prototype curriculum is designed to be comprehensive and to include all knowledge and skills needed to perform the functions and tasks involved in EMS administration/management. Thus, it is designed particularly for the new entrant to the field of EMS administration. However, it is expected that all or portions of the curriculum will be helpful to incumbents. The program's focus on new entrants requires that the curriculum be broader in scope than one developed exclusively for individuals in particular EMS program positions. Another implication of this program focus is the expected diversity in educational attainment of students--both new entrants and incumbents. However, instruction is planned at the college level and is designed in a manner appropriate to the backgrounds, attitudes and learning skills of mature adults.

Functions and Tasks in EMS Administration

EMS administrators throughout the country are involved in planning, implementing, coordinating and evaluating programs designed to upgrade, integrate and regionalize the delivery of EMS in their States. The performance of these functions requires decisions of great diversity and complexity with critical implications for the well being of all people in their region. The EMS administrator may perform many roles, e.g., as analyst or

problem-solver, decision-maker, advisor or community leader. Further, the specific tasks he performs will vary as a result of differences in the EMS program organization, the degrees of implementation and features of program plans and the characteristics and available EMS resources of each State. Thus, the job description for an actual position in EMS program administration can involve responsibility for any combination or all of the following functions and associated tasks.

1. EMS Program Planning

This function involves two major subfunctions: 1) research to determine the current status of EMS, identify requirements and establish program priorities, and 2) documentation to present research findings and a program for upgrading and coordinating services. Representative tasks are identified for each planning subfunction:

- Conduct research: Design and conduct survey(s); analyze and evaluate data, including size and pattern of EMS demand; identify action items and establish priorities; prepare technical report of research findings; and prepare summary of research and recommendations for general public.

- Prepare documentation: Follow DOT guidelines and develop State EMS Plan - 1) summarize status information, 2) specify objectives, 3) describe EMS system concept and program organization, 4) provide schedule of actions with milestones, and 5) develop budget; prepare annual revision of plan as appropriate; and detail State EMS program organization concept.

2. Implementation (EMS System Development)

Implementation includes the activities of establishing a program organization, specifying the system requirements, consulting with and assisting local communities to improve EMS, training, certifying and licensing personnel, educating the public about the need and acceptable standards for EMS, and preparing proposals and applications for grants to upgrade and develop EMS.

- Establish program organization: Identify personnel requirements; select and hire staff personnel; assign staff responsibilities and tasks; and participate in developing state-wide organization.

- Document requirements for system development: Prepare guidelines, draft legislation, standards, specifications, etc.

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- Consult/assist/advise: Meet with community leaders and professionals to encourage, advise and assist them to improve EMS; assist in development of integrated EMS systems based on regional EMS communication and dispatching systems.

- Upgrade EMS personnel: Organize programs of training for EMS personnel; initiate procedures for EMS personnel certification and licensure.

- Educate public: Organize a public education program; develop materials for use by media--articles, talks, etc.; participate in professional and public education activities.

- Prepare proposals/grant applications: Prepare proposals and budget requests at State level; assist communities prepare grant applications for equipment and funds; establish funding criteria.

3. Control (EMS Coordination/Evaluation)

Maintaining control over EMS system development involves managing the State's program office, coordinating and assisting communities in the development of EMS systems and system components, monitoring and evaluating EMS developments and status throughout the State, and supporting and evaluating special R&D projects.

- Manage EMS program office: Supervise EMS program office - personnel, activities, budget and expenditures, schedules; update program priorities, budgets, and schedules.

- Coordinate/assist in EMS system development (i.e., in all aspects of EMS including legislation, standards, finances, organization, policies and procedures, equipment and facilities, personnel, communications, records): Revise and update guidelines, manuals and procedures; supervise, revise and participate in education programs for general public, professional and political groups; supervise and participate in training programs for EMS personnel at emergency facilities, ambulance and other emergency services, communications and records units, etc.; certify EMS personnel; facilitate interagency cooperation at State and local levels; inspect equipment and facilities and revise specifications as appropriate; issue/revoke licenses; assist in categorizing medical facilities; approve grant applications; administer grants.

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- **Monitor EMS developments:** Establish and maintain EMS reporting and information system; require periodic update of resources inventory; require regular submissions of EMS system response data.

- **Evaluate EMS program and system performance:** Develop system evaluation criteria; provide periodic analyses of EMS demands and system performances by region; conduct site visits and participate in complaints review boards; participate in periodic analyses of clinical outcomes of cases.

- **Promote EMS research and development:** Plan or approve, support and evaluate special R&D projects.

Knowledge and Skill Requirements

The well equipped EMS Administrator should have a depth of understanding of EMS program administration and a breadth of technical knowledge and skills at his disposal. He should:

- Be thoroughly familiar with emergency medical services from a variety of perspectives, including the organization and dynamics of EMS delivery systems, EMS as it relates as a component of the larger health care delivery system, EMS as a clinical phenomenon with unique constraints, procedures and problems.

- Be able to view EMS and health care with an understanding of the entire environment within which they function and in the context of competing individual/community needs and resultant limited resources.

- Be skilled in program administration, office administration, and even be able to manage an EMS system or component of such a system.

- Be an effective communicator, both within the EMS program and system, and in the community at large.

- Be a decision-making administrator, thus, a problem-solver, but not necessarily the analyst or technician.

- Be skilled in problem formulation, able to select quantitative techniques to assist in problem analysis as appropriate, and knowledgeable in the interpretation of analytic and statistical results.

In all his dealings with specific EMS problems, the program administrator must not lose sight of the overall program goals, or his appreciation of the interrelatedness of the many components of EMS systems, and of the EMS systems with their particular environments.

He must be self-perceptive and recognize the many roles he must play at different times and in different situations - researcher, problem-solver, decision-maker, manager, interpreter and educator.

He must be committed to the public interest, to the development of more efficient systems for meeting the public's needs for emergency medical care, and to the pursuit of a problem-oriented, systematic approach in fulfilling his responsibilities.

Training Program Requirements

This section highlights discussions and resolutions pertaining to the target student group for the training program, prerequisites for training, and level of training. In addition, some concepts on administration of the training program are included. The discussion points and resolutions are as follows:

- Administrative positions in State EMS programs are currently staffed by a variety of individuals including those with high school diplomas, baccalaureate degrees, and advanced degrees including medicine.

- The expansion of State EMS programs (in response to Federal requirements and pressures) will create many new administrative positions at the community and regional levels that are directly involved in the development, operations and evaluation of improved emergency medical services systems.

- Experienced recruits for new positions in EMS program administration might be drawn from nursing, medical and other allied health professions; other local, State and Federal government agencies and programs (such as health and welfare, safety, civil defense, planning, etc.); the military services; and civilian emergency services.

- The backgrounds and experiences of new entrants to the field are expected to be as variable as are those of incumbents.

- The target group for training is the new entrant to the field of EMS administration. However, it is not intended to exclude individuals currently serving in various positions in EMS administration. It is expected, in fact, that many incumbents

may wish to take part or all of the training program. Specifying the target group as the entrant to the field simply makes the course broader in scope. Including the incumbent requires consideration of innovative techniques for training for persons holding full-time positions and for building appropriately on relevant prior and current experiences.

The varying qualifications and prior work experience of current EMS administrators, their support for the objectives of this project and our survey of the appropriateness and adequacy of available educational programs all confirm the need for more specific professional training programs in EMS administration. Many jobs provide valuable and appropriate experience of some elements of EMS systems or of EMS program administration - such as emergency services, communications, the military, health services and jobs in other government agencies and especially in State or federal health services or health care programs, civil defense, etc. Similarly, there are a number of educational programs available at both the graduate and associate degree level which are relevant to EMS program administration. But none are sufficiently comprehensive to cover all the subject areas identified as required for a complete program in EMS administration.

CURRICULUM ORGANIZATION AND CONTENT

Introduction

Detailed analyses of the training requirements for EMS program administration ultimately yielded identification of 21 distinct instructional areas or major topics to be addressed by the prototype curriculum. These instructional areas define the overall scope of the prototype curriculum and are termed "components" or content clusters. Convenient groupings of the components are represented by the six instructional modules, constructed largely on the basis of logical dependencies and similarities in content among components. This basic organization has proved useful both for summarizing the content of the prototype curriculum (as in the Curriculum Guide) and for structuring alternative training programs in EMS program administration (demonstrated in the Program Guide).

Each curriculum component contains from two to seven instructional units, representing the principal sub-topics, which further define component contents. In all, more than 80 instructional units have been developed for the 21 curriculum components.

Outline of Prototype Curriculum

The remaining pages of this document focus on describing the prototype curriculum in terms of 21 curriculum components, divided into six modules. The format for presentation is consistent throughout the module groupings.

An overview of the scope of each module is illustrated on the blue divider page separating modules. The divider-page diagram serves as a quick introduction to the content of the module and indicates selected information about the nature and anticipated availability of the instructional units. Immediately following the diagram, the module's contents are further introduced by summaries of its 1) composition, 2) instructional objectives, and 3) references, keyed to specific units as appropriate. Then, each module contains a set of content outlines for each of three or four curriculum components. The contents of each component are first highlighted in a "scope" section, followed by brief content outlines for each instructional unit within the component.

Each curriculum component is assigned a letter of the alphabet to facilitate its identification and use as a "building block" in constructing program configurations. Instructional units, however, are numbered sequentially within component, with the particular sequence not necessarily representing the only logical development of content.

The prototype curriculum is described in accordance with the following organization of components:

Government and Health Care Module

(A) American Government: Structure, Roles and Functions

(B) Health Care Resources and Structure

(C) Health Care Issues and Government

Human Relations and Communications Module

(D) Introduction and Overview

(E) Personal Communications Skills

(F) Small-Group Dynamics

(G) Organizational Communications

Administration: Theory and Principles Module

(H) Historical Background of Management

(I) Fundamentals of Administration

(J) Quantitative Methods for Administrators

EMS Delivery: Dimensions and Status Module

(K) Evolution of EMS Concern

(L) EMS Elements and Requirements

(M) Current EMS Operations

(N) EMS Issues

EMS Delivery Systems Module

(O) Systems Background

(P) Information and Data Communications

(Q) EMS System Development

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EMS Program Administration Module

(R) The EMS Program Context

(S) EMS Program Administration

(T) Accounting and Budgeting

(U) Contracts and Grants

GOVERNMENT AND HEALTH CARE MODULE
(SCOPE: COMPONENTS AND UNITS)
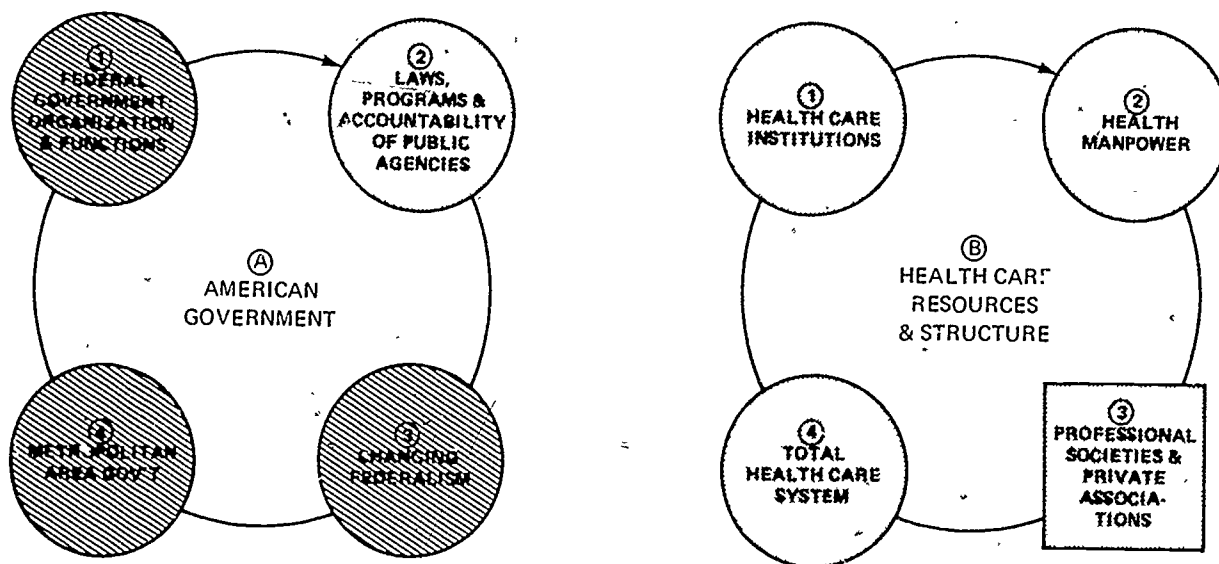
(A) AMERICAN GOVERNMENT
- ① FEDERAL GOVERNMENT ORGANIZATION & FUNCTIONS
- ② LAWS, PROGRAMS & ACCOUNTABILITY OF PUBLIC AGENCIES
- ③ CHANGING FEDERALISM
- ④ METROPOLITAN AREA GOV'T

(B) HEALTH CARE RESOURCES & STRUCTURE
- ① HEALTH CARE INSTITUTIONS
- ② HEALTH MANPOWER
- ③ PROFESSIONAL SOCIETIES & PRIVATE ASSOCIATIONS
- ④ TOTAL HEALTH CARE SYSTEM

Likely Coverage of Unit in Existing Programs

⊘ = Available at most universities
○ = Available at universities with health care administration programs
○ = Probably not in existing programs

(C) HEALTH CARE ISSUES & GOVERNMENT
- ① ORGANIZATIONAL ALTERNATIVES
- ② COSTS & SOURCES OF FUNDING
- ③ HEALTH CARE FINANCING & NATIONAL HEALTH INSURANCE
- ④ HEALTH PLANNING
- ⑤ REGIONAL HEALTH PLANNING
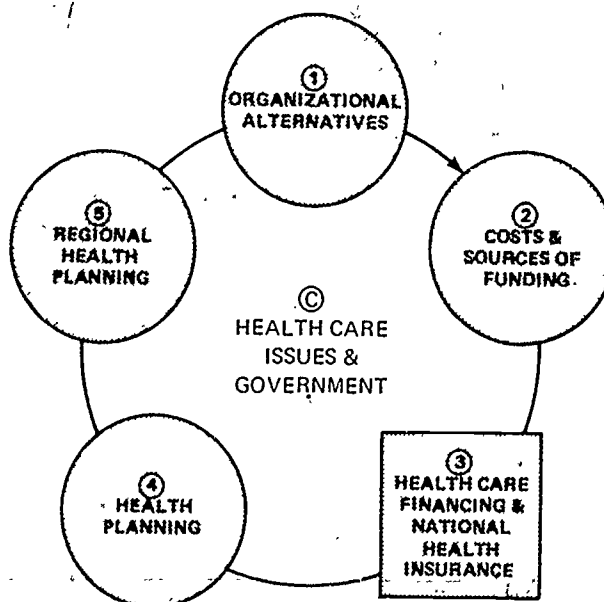
GOVERNMENT AND HEALTH CARE MODULE

Composition: 3 components, comprising 13 instructional units:

(A) American Government - 4 units

(B) Health Care Resources and Structure - 4 units

(C) Health Care Issues and Government - 5 units

Objectives: Curriculum content, in this module, is designed to provide perspective on health care and develop an understanding of the context in which the EMS administrator works. In general, the content areas addressed here are of an introductory, or background nature, requiring no prior exposure to materials in any other part of the curriculum.

Two major topics are discussed: American government and health care services. Each topic is examined independently and also explored from the standpoint of how each relates and interacts with the other in pursuit of national health goals.

The content covered under government and health care addresses a common set of interrelated objectives: mainly, to develop an understanding of 1) the basic nature and potentials of the "public sector", 2) the role of and constraints on the administrator within the public sector, 3) the perspectives, problems and collective influence of health care providers, and 4) emerging government and consumer roles in health, and the potentials for public/private sector partnership. Overall, the intent of this module of the curriculum is to provide a general setting and to create realistic expectations for the specific functions and tasks of the EMS program administrator, discussed in later modules; that is, with respect to what is possible as a public administrator and feasible within the health care system.

Coverage of material in this module should enable students to 1) describe the organization of federal, state and local government, the interrelationship and principal elements at each level and the relationships among the three levels of government, 2) describe the legislative, regulatory and budgetary functions of government, while drawing illustrations from the health care field, 3) identify specific health and welfare services and programs administered at federal, state and local levels, 4) recognize the mission, organization and budget of each relevant federal agency and the interfaces and interactions among these various agencies, and 5) describe the components and operation of the total health care delivery system, and recent development and trends.

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References: The following compilation of references was developed for and utilized in preparing the curriculum content described in this module. The references are listed sequentially, by unit, corresponding to the ordering of instructional units within the components of the module. For example, references identified below for unit (A 4) represent the major sources for the fourth unit in component (A), or, the instructional unit entitled "Metropolitan Area Government," within the "American Government" component.

(A 1)

- Deutsch, K. W. <u>Nerves of government.</u> New York: Free Press of Glencoe, 1963.

- U.S. Department of Health, Education and Welfare. <u>Annual report of 1973.</u> Washington: GPO, 1974.

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- Frechette, A. L. Local and state health departments. In L. J. De Groot (Ed.), <u>Medical care: Social and organizational aspects.</u> Springfield, Illinois: C. C. Thomas, 1966. Pp. 364-381.

(A 2)

- Yerby, A. S. Public medical care for the needy in the United States. In L. J. De Groot (Ed.), <u>Medical care: Social and organizational aspects.</u> Springfield, Illinois: C. C. Thomas, 1966. Pp. 382-401.

- Shannon, J. A. The place of the National Institute of Health in american medicine. In L. J. De Groot (Ed.), <u>Medical care: Social and organizational aspects.</u> Springfield, Illinois: C. C. Thomas, 1966. Pp. 413-424.

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- Appalachian Regional Commission. The Appalachian health program: A progress report. <u>Appalachia,</u> 1970, <u>3</u>(8).

(A 3)

- Loenig, L. W. The presidency. In M. S. Stedman (Ed.), <u>Modernizing american government: Demands for social change.</u> Englewood Cliffs, N. J.: Prentice-Hall, 1968. Pp. 10-32.

- Derge, D. R. The congress. In M. S. Stedman (Ed.), <u>Modernizing american government: Demands for social change.</u> Englewood Cliffs, N. J.: Prentice-Hall, 1968. Pp. 33-62.

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McKee, C.D. Local and state government. In M.S. Stedman (Ed.), Modernizing american government: Demands for social change. Englewood Cliffs, N.J.: Prentice-Hall, 1968. Pp. 153-177.

Heard, A. (Ed.) State legislatures in American politics. Englewood Cliffs, N.J.: Prentice-Hall, 1966.

Campbell, A. (Ed.) The states and the urban crisis. Englewood Cliffs, N.J.: Prentice-Hall, 1970.

Reuss, H.S. Revenue sharing: Crutch or catalyst for state and local government. New York: Praeger Publishers, 1970.

Jacob, H., and Vines, K.N. (Eds.) Politics in the American states. Boston: Little, Brown and Co., 1965.

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Banfield, E.C. (Ed.) Big city politics. New York: Random House, 1965.

(A 4)

Ewald, W.R. (Ed.) Environment for man: The next fifty years. Bloomington, Indiana: Midland Illinois University, 1967. Pp. 157-184.

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University of Michigan, School of Public Health. University of Michigan chart book. Ann Arbor: University of Michigan.

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American Hospital Association. The AHA guide to the health care field. Chicago: AHA, annual.

Chrichton, M. Five patients. New York: Alfred A. Knopf, 1970.

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Schonfeld, H.K., et al. Numbers of physicians required for primary medical care. New England Journal of Medicine, 1969, 286, 571-576.

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Lewis, C.E., et al. Activities, events, and outcomes in ambulatory patient care. New England Journal of Medicine, 1969, 280, 645-649.

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- Sidel, V. W.   Feldshers and feldsherism. New England Journal of Medicine, 1968, 278, 934-939 and 987-992.

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- Silver, H., et al.   The pediatric nurse-practitioner program: Expanding the role of the nurse to provide increased health care for children. Journal of the American Medical Association, 1968, 202, 298-302.

- Stead, E. A.   The physicians assistant - job description and licensing. Medical Times, 1969, 97, 246-247.

- Smith, R. A.   Medex. Journal of the American Medical Association, 1970, 211, 1843-1845.

- Sidel, V. W.   The barefoot doctors of the Peoples' Republic of China. New England Journal of Medicine, 1972, 286, 1292-1299.

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(B 3)
- Yale Law School, American medical association: Power, politics, and prestige. Yale Law Journal, 1954.

- Kissick, W. L.   The health system. In S. E. Golann and C. Eisdorfer (Eds.), Handbook of community mental health. New York: Appleton-Century-Crofts, 1972. Pp. 51-71.

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- Somers, A. R.   Health care in transition: Directions for the future. Chicago: Hospital Research and Educational Trust, 1971.

(C 1)
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of basic health economics data. Washington: DHEW, 1964. PHS
No. 947-3.

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financing and utilization. Washington: DHEW, 1967. PHS No. 947-1A.

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. U.S. Department of Health, Education, and Welfare. Estimating
the cost of illness. Washington: DHEW, 1966. PHS No. 947-6.

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Michigan chart book. Ann Arbor: University of Michigan.

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New England Journal of Medicine, 1971, 284, 881-886.

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Health Insurance Proposals: Provisions of bills introduced in the
93rd Congress as of February 1974. Washington: DHEW. Proposal
SSA 11920.

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and determinants of health policy. New York: Milbank Memorial
Fund, 1968. Pp. 91-117.

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Service. Health services areas. Washington: PHS, Center for
Disease Control, 1945.

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Journal of Medicine, 1961, 265, 885-892.

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health centers. Washington: GPO, 1945.

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and determinants of health policy. New York: Milbank Memorial
C 5   Fund, 1968. Pp. 91-117.

. McNerney, W.J., and Riedel, D.C. Regionalization and rural health
care. Ann Arbor: University of Michigan, 1962. Pp. 1-15 and 147-149.

. Komaroff, A.L. Regional medical programs in search of a mission.
New England Journal of Medicine, 1971, 758-764.

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(A) AMERICAN GOVERNMENT: Structure, Roles and Functions

Scope: ● Characteristics, functions and interrelationships among components of the federal government.

● Present status and evolving nature among the levels of government.

● Functions, responsibilities and accountability of public agencies.

● Overview of the administrative process within government.

(1) <u>Federal Government Organization and Functions</u>
(Objectives + Outline + References - Lecture format)

- Organization of the U.S. Government

  - <u>Congress</u>: components, intrarelationship, legislative process, traditions, committee structure, relationship with Executive Branch, appropriations.

  - <u>Executive Branch</u>: components, organization, administrative issues, independent administrative agencies, DOT and HEW, especially EMS programs in each, decentralization and administrative processes, revenue sharing and relationship with states.

  - <u>Federal Courts</u>: characteristics, function, methods of operation and interrelationships of U.S. Supreme Court, U.S. Courts of Appeal, U.S. District Courts, and special federal courts.

- Functions and Responsibilities of Government

  - <u>Congress</u>: role in setting national goals and objectives, budgetary priorities, as collective voice of represented constituents, resolution of national issues.

  - <u>Administration</u>: Office of the President, relationship with Congress.

  - <u>Supreme Court</u>: role in balancing power between Congress and the Executive.

• Government in Action

    – The governmental process and its mechanisms.

    – Sources for monitoring government.

② <u>Laws, Programs and Accountability of Public Agencies</u>
(Objectives + Outline + Content Materials + References –
Lecture + Seminar formats)

• Selected (Health) Laws, Agencies and Programs:
review of a variety of programs and the form of
implementation within public agencies.

    – <u>Section 301 – Public Health Service Act</u>: selected
excerpts, National Institutes of Health –
organization and activities, biomedical research
and training programs - direct operations, con-
tracts and grants.

    – <u>Title XVIII – Social Security Act</u>: selected
excerpts, coverage components, the Bureau of
Health Insurance, Social Security Administration –
functions and process.

    – <u>Title XIX – Social Security Act</u>: selected
excerpts - scope of assistance, eligibility cri-
teria, Social and Rehabilitative Service,
Medical Services Administration – functions.

    – <u>1972 Amendments (P. L. 92-603) – Social Security
Act</u>: Medicare - XVIII C(HMO), Certificate of
Need, PSRO, renal dialysis, Medicaid - family
planning, child health screening.

    – <u>Section 304 – Public Health Service Act</u>: selected
excerpts, research and demonstration projects -
objectives and characteristics, Bureau of Health
Services Research, National Center for Health
Services R&D, program descriptions - planning,
licensing and regulation, productivity of health
services, economic analysis, quality and data for
health care, implementation process.

    – <u>Section 314 – Public Health Services Act</u>: selected
excerpts, comprehensive Health Planning - 314a,
314b, 314c, 314d, 314e, implementation, program
examples - projects funded.

- Section 202 - Appalachian Regional Development Act: example of advanced health legislation, a prototype, implementation on federal, state and local levels, program examples, administrator's role.

• State Health Department

- Evolution of role in health affairs, changing nature of responsibilities.

- Organization and services: representative structure and interrelationships.

• Local Health Department

- Increasing involvement in personal health services: new collaborative arrangements with private sector.

- Organization and services: representative structure and interrelationships.

• Dilemmas of Public Administration: consideration of the role and problems of the administrator in public agencies via exploration of 2 case studies.

(3) State Government and Changing Federalism
(Objectives + Outline + Content materials + References - Lecture format)

• Legal Basis for Governmental Relations

- U.S. Constitution: allocation of powers, specification of restrictions, Amendment X, historical health affair development in the states, Federal administration under "General Welfare."

- Expansion of federal role in health: 1930's change.

• State Constitutions and Legislative Development

- State law: legislative powers and internal affairs, constitutional revisions, new legislative patterns, accumulated procedural requirements, encumbering constitutional provisions.

- <u>Governor</u> and executive agencies: accretion of powers, terms of office, control over executive agencies and state programs, budget and revenue restrictions.

- <u>State legislature</u>: surveillance of executive branch and local government programs, general and public law making, economic and special interest legislation.

- <u>Malapportionment</u>: representation according to outdated political jurisdictions, rural dominance. Supreme Court decision - one man, one vote rule, legislative and constitution revison.

- <u>Legislative</u> organization and procedure: session requirements, rules and operations, legislator turnover, record keeping, leadership functions, committee systems, bill processing.

. Growth of Federal Power

- <u>Federal-State relations</u>: early categorical programs, Morrill Act, 1930 health, labor and welfare, Federal Highway Act of 1956, 1960's categorical grants for metropolitan areas, state policy pre-emption, state budget impact, the development of structures for program coordination.

- <u>State-Local relations</u>: legal subordination, inadequate state or local home rule powers, expanding metropolitan or special jurisdiction boundries, fragmented but resentful autonomy within local governments.

.. Options in Changing Federalism: evolution of governmental means to an end.

- <u>Social and community programs</u>: increased funding, categorical programs, revenue sharing, other financing.

- <u>Shifting burden</u> of payment and accountability: search for equity in payment and service, increasing contracts to private sector for public enterprise.

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- Human service programs vs. governmental boundaries: more functional than geographic, required new patterns of response.

- Need for Coordination: emphases on lateral and vertical coordination within all government, required new modes of planning, management and evaluation.

- Governmental Roles in Health

  - Pluralistic partnership trend.

  - Transitions in health care systems.

  - EMS in the era of pluralism.

- Appalachian Regional Commission: an experiment in regional government.

  - Intra- and interrelationships.

  - Commission structure and programs.

  - Budget allocation: appropriations, funding process, trade-offs.

- Regional Systems in Health Services

  - National Health Policy and Health Development Act of 1974: council, agencies' characteristics, health commissions, grants.

  - Evolution of health programs: areas of planning, development and regulation.

  - Implications for context of EMS: commissions, planning boards, HMO's, NHI, goals, strategies, priorities.

(4) Metropolitan Area Government
(Objectives + Outline + References - Lecture + Seminar formats)

- Local Government

  - Responsibilities: representative public services, functions, dimensions of role.

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- Issues: growth rates, industrialization, density, residential affluence, welfare, unemployment, migration, crime ... .

- Organization and Political Power

    - County, city, county + city.

    - Power structure: characteristics of mayor vs. city manager vs. board of supervisors vs. city council.

    - Leadership and process: options, power, politics and planning, Big City Politics.

- Financing Urban Government

    - Roles of governmental levels.

    - Tax sources.

- Federal Programs for Metropolitan Area Government: loans, grants, and other funds.

    - Low-income housing.

    - Mass transportation.

    - Urban planning and renewal.

    - Open space land acquisition.

    - Public facilities.

    - Public works planning.

    - Hospital and medical facilities.

    - Waste treatment.

    - School construction.

    - Small business.

    - Airports.

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- Civil defense and disaster relief.

- Others.

. Health as a Responsibility of Metropolitan Area
Government: consideration of health issues within a
metropolitan setting via a case study of health centers
and community needs.

(B) HEALTH CARE RESOURCES AND STRUCTURE

Scope:
- Characteristics, diversity and interrelationships among health care institutions and facilities.

- Scope, magnitude and complexity of health manpower and its organizational forms.

- Dimensions, elements and structure of the health care system and the internal/external forces shaping it.

(1) Health Care Institutions
(Objectives + Outline + References - Lecture + Seminar formats)

- Basic Types - Description

   - Hospitals: ownership, affiliation, types of services characterizations.

   - Health departments.

   - Health Centers.

   - Group practices.

   - Nursing homes.

   - Visiting Nurse agencies.

- Types and Sources of Institutional Data

- Recent Trends

   - Institutions: new kinds, budgets, productivity . . . .

   - Health care systems: institutional linkages - nature and examples, Kaiser Foundation plan, Greenville Hospital System, Appalachian regional hospitals . . . .

- EMS in Health Care Systems

   - EMS as stimulus.

   - Adaptation and new developments for institutions.

- Institutions and EMS Models: consideration of the role of health care institutions in selected EMS models via analysis in three settings - urban, suburban, rural.

(2) Health Manpower
(Objectives + Outline + References - Lecture format)

- Health Manpower Definitions

  - Health services industry: Bureau of Census, evolution, relationship with other industries.

  - Health occupations: categorization, degree of specialization.

  - Health labor force: employment in health service industry vs. health occupations, trends since W.W. II.

- Trends in Health Manpower

  - Specialization.

  - Relationships among occupations: relative growth rates, utilization patterns and team services.

  - Manpower responses.

- Determination of Manpower Requirements

  - Population ratios: use, Bane Report, forecasting, state or regional comparison.

  - Economic projections: budget forecasting, bio-medical research, Center for Priority Analysis.

  - Peer judgment: nature and implications, Lee-Jones study (1932), Surgeon General's Consultants, folk study, rehabilitation study, Knowles study.

- Health Manpower - circa 1975: characteristics, occupations, distribution, utilization ... .

- Resources for Health Manpower: educational system, new careers ... .

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Factors Influencing Manpower Potentials

- Income and salaries.

- Educational inflexibility.

- Consumer expectation.

- Professional conservatism.

- Organization and utilization.

• Health Manpower Policy Essentials

- Educational programs: levels, types, instruc-
  tional methods, theory-skill spectrum, core
  curricula, as continuing process.

- Career mobility: transfer of function, applica-
  tion of technology.

(3) Professional Societies and Private Associations
(Objectives + Lecture notes + Reference - Seminar format)

• Types, Objectives, Functions and Roles of Professional
  Societies and Associations: professional standards,
  societal protection, political lobbying, consumer edu-
  cation, prestige ... .

• Professional Conflicts.

• Selected Examples - Professional Societies and
  Associations: identification by name and purpose.

• Seminar Exercise: role playing as Ad Hoc Committee
  to consider desirability and organization of an EMS
  Administrators Association.

(4) Total Health Care System
(Objectives + Outline + Content materials + References - Lecture format)

• Dimensions of the Health Care Enterprise

- Economic perspective.

- Labor force and health occupations.

- Health services industry.

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- Qualitative Characteristics: education and training, body of scientific knowledge, specialization, jurisdictional disputes.

- Factors influencing manpower potentials.

• Conceptual Model of Health Care Systems

- Major (provider) components.

- Consumer characteristics and trends.

• Health Care Resources

- State of the Art: health care knowledge and technology, impacts on character of services available and needed.

- Stock of capital: facilities and equipment - extraordinary breadth, diversity and complexity, characterization of selected examples.

- Health manpower: critical resource in labor intensive industry, key characteristics and issues.

• Health Care System Inputs: concept of resource inputs, characteristics of selected examples.

• Health Care Delivery Systems: concept of translating resource inputs to service outputs, system factors - health care financing and patterns of organization.

- Financing mechanisms: characteristics, advantages/disadvantages of basic types, both traditional and innovative or experimental.

- Patterns of organization: characteristics, advantages/disadvantages of basic types, both traditional and innovative or experimental.

• Health Care System Outputs: services description.

• Outcomes (Intermediate and End Results): population enjoying health and well being, outcome measurements difficult, varying approximations.

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- Consumer Role in Policy Feedback: compensation for lack of market system, provision of input for resource allocation.

- Population Need and Demand: concepts and distinctions.

- Resource Assessment: determination of existing and forecasting of future resources for planning and organizational strategies, resource allocation, utilization and substitution.

- Community and Regional Institutions: addresses a corporate function which, in the context of health care, is the merging of private initiative and public accountability in the public interest.

  - Policy institutions: CHP agency, Experimental Health Care Delivery Systems (Health Management Corporations, RMP's, others).

  - Operational health care systems: OEO (Denver) Health Networks, Kaiser Plan, Appalachian Regional Hospital System, Indian Health Service ... .

- Planning and Organizing Health Care Systems: historic lack of planning vs. current emphasis as basic requirement, introduction of the planning process in health care delivery and EMS, technique and process.

C. HEALTH CARE ISSUES AND GOVERNMENT

Scope:
- Pluralism in health care delivery and the emerging roles of consumers.

- Nature and magnitude of health care system costs and the issues involved in health care financing.

- The concepts, principles and future potentials of health planning.

- Concepts associated with the regionalization of health care services and current issues of regional health planning.

1. Organizational Alternatives
(Objectives + Outline + Reference - Lecture + Seminar formats)

- Patterns of Medical Practice (Selected): variations in the organization of medical care are discussed within a dozen basic modes of delivery, e.g., variations in solo practice, within community hospital settings, etc.

- Unique Examples (of delivery patterns): organizational characteristics and delivery practices are explored for eleven examples cited, e.g., Mayo Clinic, Frontier Nursing Service, Group Health of Puget Sound, etc.

- Whither the Consumer?

  - Patient's views of medical practice: doctor-patient conflicts examined from various perspectives, lay referral system types, lay controls, professional controls.

  - Consumer roles in health care systems: various traditional roles in selected settings, emerging roles highlighted, discussion of new consumer opportunities.

- Organizational Alternatives - differing perspectives: regional health planning council role-playing exercise is structured to provide the context for this discussion.

(2) Costs and Sources of Funding
(Objectives + Outline + References - Lecture + Seminar formats)

- Health Care Costs

  - Expenditures for (selected) health care services.

  - Historic and current growth rates.

  - Hospital costs: cost profiles for selected service categories.

  - Dimensions of costs: direct, indirect, unit, other, costs vs. charges.

- Sources of Funding

  - Purchase of service: various coverages.

  - Resource development: discussion of specific funding programs directed at biomedical/ systems research and training, health man- power, facilities and multiple investments.

  - Systems subsidy sources: review of sources within Health Services Administration.

- Exercise in estimating EMS program costs, projecting 5-year program requirements and identifying sources of funds for program.

(3) Health Care Financing and National Health Insurance
(Objectives + Outline + Content materials + References - Seminar format)

- Introduction: cost dimensions in health care industry, needs for health care financing.

- Private Insurance: Nature and Significance

  - Blue Cross/Blue Shield: features of each, differences.

  - Purposes addressed.

  - Group practice prepayment plans: history and characteristics traced via Kaiser experience case study.

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- Market shares: insurance companies, BC/BS, GPPP.

- Population coverage: overview of private insurance coverage.

• Problems of Insurers (selected types)

• General Problems (all private health insurers)

- Benefit adequacy.

- Cost control.

• Development of Health Coverage for the Aged and the Poor: a "mirror" of developments and issues in the entire health care field.

- Medicare: information on evolution, population coverage, coverage components, benefits, financing, reimbursement methods, fiscal intermediaries.

- Medicaid: nature and evolution of the program, state and federal roles, financing, New York and California examples.

• National Health Insurance

- Basic forces and evolutionary process: trends, needs addressed, limitations of NHI potential.

- Types of proposals.

- Criteria for evaluating proposals: measures suggested for accessibility, acceptability, efficiency, implementation, regulation, quality of care.

- Major inadequacies of current proposals.

(4) Health Planning
(Objectives + Outline + References - Lecture + Seminar formats)

• Overview of Health Planning

- Evolutionary process: U.S. and other (selected) societies.

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- Concepts and principles.

- Methodologies.

- Examples (selected) of health planning.

- Health Planning in the Soviet Union: a case review consideration of the political context, health status, health facilities planning, health manpower planning, norms and standards, and indices of effectiveness.

- The Planning Process: discussion of the dimensions, objectives and framework of the elements of planning in a health context.

  - Goal setting.

  - Definition of objectives.

  - Formulation of program alternatives.

  - Methodologies.

  - Political processes.

  - Implementation considerations.

  - Evaluation.

- Exercise of the Planning Process: development of an EMS plan for a hypothetical community, planning needs to meet defined community expectations and to be conducted on cooperative, community-wide basis.

⑤ Regional Health Planning
(Objectives + Outline + References - Lecture format)

- Introduction: health planning in an evolutionary, trial-and-error stage, many avenues explored - successes and failures, traditional approach - laissez-faire, objective today for a broad-based, orderly, organized, systematic process.

- Regionalization in the United States

  - Committee on Costs of Medical Care: regionalization recommended in 1932, forceful, articulate justification yielding little impact to today.

- Coordinated Hospital Services: concept
  advanced in 1945 by U. S. Public Health
  Service, objectives advanced and service
  areas proposed.

- Hill-Burton Program and Area-Wide Hospital
  Planning: legislative history traced, imple-
  mentation, effects on regionalization.

- Regional Medical Programs: background and
  legislative history, transitions and difficulties
  in implementation, shifting priorities, diversity
  in programs.

- Comprehensive Health Planning: background
  and legislative history, Partnership for Health,
  area-wide planning vs. regionalization of health
  services, relationship with RMP's.

- Appalachian Health Program: relationship to
  other regionalization plans, legislative intent,
  program flexibility.

• Regional Health Care Systems: examples of opportuni-
ties for regional development of resources, e.g.,
automated clinical laboratories, high-voltage
radiotherapy, communications network, etc.

• Organized Regional Programs in Health Care: review
of successful approaches, unique features, regionali-
zation as a unique synthesis of concepts and principles.

- Kaiser Foundation Health Plan: basic organization,
  provider services, historical background, the plan
  as a potential model for regionalized medical care
  systems, current limitations.

- Appalachian Regional Hospital: historical back-
  ground, present organization, environmental
  uniqueness, components of the plan, success with
  reqionalized EMS.

- Greenville Hospital System: basic organization
  and environment, historical perspective of process
  of institutional innovation, political dimensions of
  the planning process.

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-   <u>Veterans Administration</u>: military model with civilian characteristics, relationship with medical centers - teaching and research, positive influence on regionalization, probable effects of national health insurance.

-   <u>New York City Hospital Corporation</u>: characteristics of this massive system in an urban center, beginnings of regionalization.

-   <u>American Medicorp</u>: example of proprietary hospital chains, intrachain relationships, limited approaches toward regionalization, private vs. public incentives for regionalization.

HUMAN RELATIONS AND COMMUNICATIONS MODULE
(SCOPE: COMPONENTS AND UNITS)
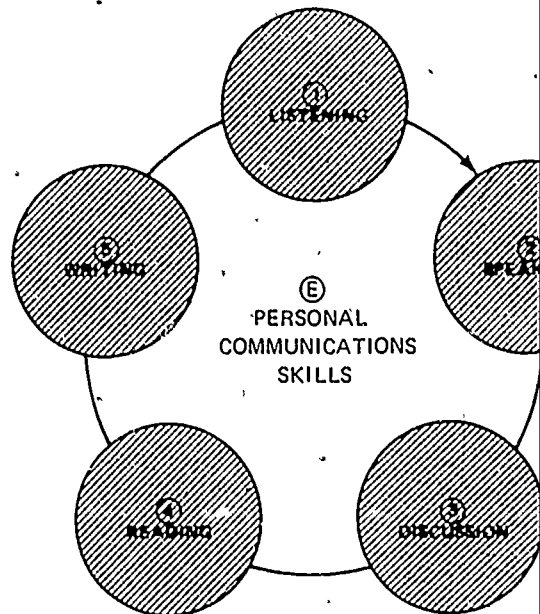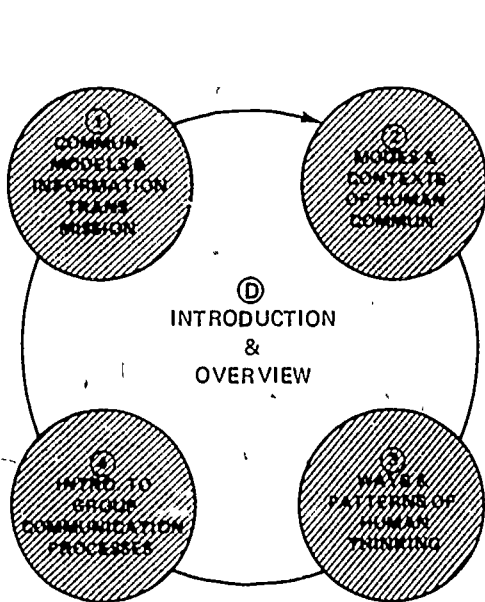
Likely Coverage of Unit in Existing Programs.

⊘ = Available at most universities

◯ = Available at universities with health care administration programs

◯ = Probably not in existing programs
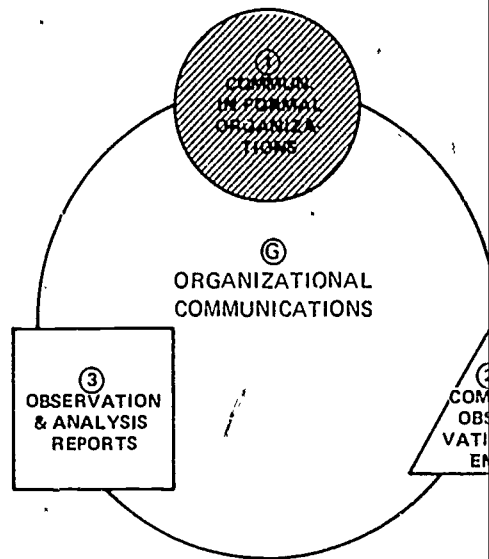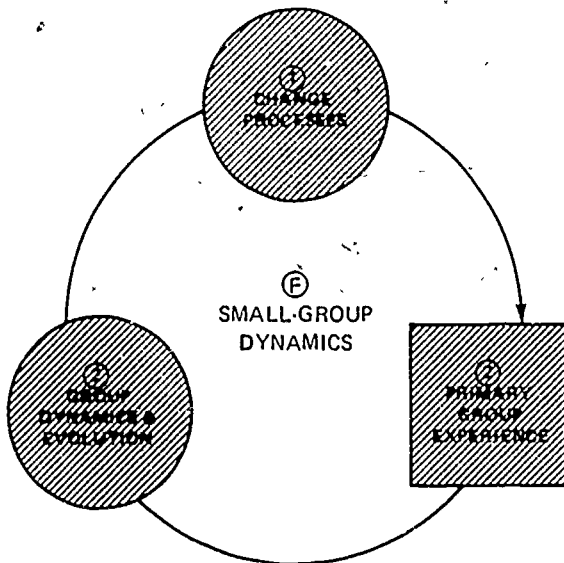
HUMAN RELATIONS AND COMMUNICATIONS MODULE

Composition: 4 components comprising 15 instructional units:

(D)' Introduction and Overview - 4 units

(E) Personal Communications Skills - 5 units

(F) Primary Group Experience - 3 units

(G) Organizational Communications - 3 units

Objectives: The purpose of this module is to acquaint the student of EMS program administration with a systematic and interdisciplinary behavioral science model by which he may view the complex interaction of human behavior in organizations. With the model the program administrator should be able to understand and anticipate personality styles or group behaviors which may be potentially disruptive of EMS system development.

Firsthand human relations experiences are included to examine, in a real and immediate context, the impact of feelings on human behavior. The experiences should point out persons' interdependent needs for structure and emotional support, as well as the student's faculties of interpretive observation and social support. The individual or personal communication skills necessary for program administration are stressed in units reviewing the basic interactional behaviors of critical thinking, listening, speaking, group discussion, critical reading and informative writing.

The application of all learned skills is found in the final component where the student is expected to identify, gain access to, and engage in dialogue with the elements of a fragmented or developing EMS system. These experiences will serve as the content for the student's development of oral and written, informative and evaluative reports, role-play scripts, and argumentatory debates.

References: The following compilation of references was developed for and utilized in preparing the curriculum content described in this module. The references are listed sequentially, by unit, corresponding to the ordering of instructional units within the components of the module. For example, references identified below for unit ⒟ represent the major sources for the first unit in component Ⓓ , or, for the instructional unit entitled " Communication Models and Information Transmission," within the (communication) "Introduction and Overview" component.

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(D) INTRODUCTION AND OVERVIEW

Scope:
- Development, emphases, and interrelationships of theory in communication study.

- Human development and complexity of communication behavior.

- Philosophies of knowledge, logical methods, and individual style in reasoning.

- Group processes, performance, and member satisfaction.

(1) Communication Models and Information Transmission
(Objectives + Outline + Content materials + References - Lecture format)

- Evolution of Communication Theory

  - Physical science <u>foundations</u>: Shannon and Weaver's basic model, mathematical communication theory.

  - <u>Definitions</u> and concepts: system, message, channel and content.

  - Early <u>deficiencies</u> in the usage of the model to deal with human communication.

- Development of a General Theory of Communication

  - <u>Contributions</u> of many disciplines: domains of research interest, conceptual models.

  - <u>Behavioral science influence</u>: human interaction as communication, Gestalt influences, composite interacting processes.

  - <u>Models</u> of communication behavior: cybernetic, speech, transactional, and mass communications.

- Contexts of Human Communication Behavior: intrapersonal, interpersonal, small group, and mass audience communication situations.

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• Information and Data in Human Systems

- Data Systems: flow, rational systems, effectiveness criteria.

- Communication Systems: human intake aspects, noise as metacommunication, distinctions between information and data systems.

(2) Modes and Contexts of Human Communication
(Objectives + Outline + References - Lecture format)

• Developmental Stages: genetic control, infant-adult life stages, adaptive mechanisms, communication complexity.

- Models of nervous system functioning: the human organism as a complex information processing system.

• Trends in Theories: cognition, perception, and learning.

- Factors in stimuli selection: stimuli characteristics, individual physiological differences, learner experience and motivation.

- Concepts: frame of reference, opinion, attitude, hierarchies of human need, cultural differences.

(3) Ways and Patterns of Human Thinking
(Objectives + Outline + Content materials + References - Lecture format)

• Traditional and Behavioral Science Approaches

- Problems encountered in dealing with reality, truth vs. validity, cultural patterns of thinking, socialization, notions of order, causality and purpose.

- Basic value orientations: human nature, man-nature, time, activity, and relational; the interaction between knowledge and personality.

- Styles of thinking: idea development and argumentation, situational and personality bound logic flow, personal and social judgment criteria.

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• Principal Logical Methods of Validating Knowledge

- Philosophies of knowledge: skepticism, pragmatism, empiricism, rationalism, mysticism, authoritarianism.

- Criteria for evidence: logic, consistency, psychological adequacy, socially harmonious beliefs.

- Personal idiosyncrasies: relevance, meaning, structure, interrelations.

④ Introduction to Group Communication Processes
(Objectives + Outline + References - Lecture format)

• Dual Functions of Communication in Work Groups

- Concepts and definitions: task and interpersonal environments, assembly-effect bonus, social weighting, open and hidden agendas.

- Structural development: centralized and decentralized procedures, patterns of partici- pation and leadership, subgroup formation, speed and size limitations on success and adapted leadership styles.

- Task and interpersonal productivity: performance expectations, social reward systems, power-status hierarchies, role boundaries.

• Coordinate High Task and High Interpersonal Performances

- Successful work groups: supportive vs. defensive climates, leadership styles, time, perceived motives, problem-solving attitude.

(E) PERSONAL COMMUNICATIONS SKILLS

Scope: • Overview of physiological mechanisms used in human communication.

• Psycho-sociological problems associated with language and meaning.

• Guidelines for more effective personal communication skill.

(1) Listening
(Objectives + Outline + Content materials + References - Lecture + Seminar format)

. - Sense Organs Used in Listening

- Physiological mechanisms: visual, auditory, tactile and olfactory sensation, central nervous system linkages.

- Higher orde. processing: general attention and selective processing, perceptual ranges, discriminatory or filtering mechanisms, high demand emotional and distractory me sages.

. Social Influence and Critical Listening

- Situational factors: perceptual field changes, motivation, emotional messages, past learning.

- Message components: content vs. feeling, parallel message coordination.

- Purposeful messages: argumentation, interpretation, rhetorical devices.

(2) Speaking
(Objectives + Outline + References - Lecture + Seminar formats)

. Language as a Socio-psychological Coding System

- Language characteristics: analog and digital symbols, perceptual shaping, functional ambiguity redundancy.

- Specialized languages: jargon, slang.

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- Nonverbal Languages

    - <u>Conceptual meaning</u>: proxemics, gesture, posture, rate of speech, tone.

    - <u>Cross-referencing</u> messages: harmonic coordination, situational comprehensibility.

- Persuasive Speech

    - <u>Speaker characteristics</u>: credibility, role relationships, powerfulness, social distance, attractiveness.

    - <u>Message characteristics</u>: content, order of presentation, argumentation.

    - <u>Audience characteristics</u>: demographic make-up, group membership, publically stated views.

③ <u>Discussion</u>
(Objectives + Outline + Content materials + References - Lecture + Seminar formats)

- Method and Structure

    - <u>Prerequisites</u>: systematic development, purpose, problem-solving, group orientation.

    - <u>Types</u> and definitions: open and closed, committee, conference, boards, councils, panel, symposia, consensus.

    - Size and <u>styles of interaction</u>: small group methods, role playing, brainstorming, buzz groups, parliamentary methods.

- Styles of Leadership

    - <u>Formal organization</u>: guides, charters, roles.

    - <u>Discussion cycles</u>: initial, medial and terminal acts, reaction sequences.

    - <u>Interpersonal relationships</u>: positional vs. earned power social rewards and reinforcement, supportive and defensive behavior.

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(4) Reading
(Objectives + Outline + References - Lecture + Seminar formats)

- Introduction

    - Concepts and definitions: decoding, recognition, comprehension, critical reading.

    - Levels of comprehension: recognition, recall, reorganization, inference, evaluation, appreciation.

    - Critical reading processes: interpretation, analysis, synthesis, evaluation, cognitive and affective relationships.

- Personal Requirements

    - Individual abilities: perception, attention, concentration, comprehension, evaluation, memory.

    - Format dependency: format and human expectancy, syntactic projection, style.

    - Guidelines: suspended judgment, idea interaction, idea development, patterns of organization, reading speed, reflection.

    - Signals: abstract wording, sentence and paragraph length, language, tone, emotional appeals.

(5) Writing
(Objectives + Outline + References - Lecture + Seminar formats)

- Language's Hierarchical Structure

    - Concepts and definitions: philosophical, linguistic and psychological meaning, frame of reference.

    - Combinations and grammatical procedures: word selection, modifiers, clauses, voice, organization, context.

Persuasion vs. Informing Accurately

- <u>Need to write</u>: appropriateness, timing, specificity, factors of time and space, record keeping.

- <u>Process</u>: reflection, planning, content generation, objective analysis, revision.

- <u>Indices</u>: clarity, simplicity., brevity, motivational.

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(F) SMALL-GROUP DYNAMICS

Scope:
- Exploration of human personality and interpersonal behavior through firsthand experience.

- Opportunities for developing more formal observational skills.

(1) Change Processes
(Objectives + Outline + References - Lecture format)

- Social Change

  - General approaches to change: total society or cultural emphases - social traits, dynamic dominant/subordinate value conflicts; technological emphases - discovery, lag; selected processes - industrialization, urbanization and political centralization.

  - Concepts of freedom and power: natural and uncontrollable forces, unconscious interaction, socialization, indoctrination, coercion, emulation.

- Psychotherapeutic Influences and Planned Change

  - Similarities: absence of any pressure (advice, moral support), encouragement of feelings and opinions about immediate events, the development and emphasis on self-regulating mechanisms.

  - Models: system - structural integration, stress and tension reduction, adaptation; developmental - phases, actuality vs. potentiality, blockage removal.

(2) Primary Group Experience
(Objectives + Outline of strategy and assignments + References - Seminar format)

- Small Group Team Building

  - Task orientation: project decision, definition of roles, responsibilities, scheduling, documentation and presentation.

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- **Interpersonal orientation:** ambiguity and anxiety reduction, structure development, subgroup formation and conflict, leadership challenge and responsible consensus.

- Roles and Assignments

  - **Group member** and participant: source of task information, expertise, individual work effort, anxiety, interpersonal need, flexible group collaborator.

  - **Observer:** formal recorder of group inter-action activities, nonparticipating member.

  - **Instructor:** facilitator, interpreter, pro-tector of privacy, source of group anxiety and attention, not a problem solver.

- Dimensions

  - **Time:** 10-15 sessions suggested for decision making, group development, and project selection phase.

(3) Group Dynamics and Evolution
(Objectives + Outline + Content materials + References - Lecture + Seminar formats)

- Developmental Group Sequences

  - **Definitions:** power distribution, authority syndromes, dependency vs. counterdependency, overpersonal and counterpersonal styles.

  - **Dependence:** ambiguity, flight, goal seeking.

  - **Counterdependence:** structure and subgroup emergence, power struggles and aggression, leadership challenge and consensus.

  - **Interdependence:** common achievement, anxiety reduction, harmony and consolidation, consensual social action.

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• Dimensions of Group Growth

- Communication among members: vocabulary, procedures, sensitivity to member fears, needs and concerns.

- Objectivity through interdependence: sharing the leadership function, role flexibility, contribution and personality style.

- Cohesion: assimilation of new ideas and members, maintaining long-term goals, constructive use of success and failure.

• Group Failure Dimensions

- Structure and leadership: status and authority seeking, clique development and maintenance, seniority or aggressive behavior as criteria for leadership, interpersonal conflict, and participation.

(G) ORGANIZATIONAL COMMUNICATIONS

Scope:
- Perspective of large organizations as dynamic and self-balancing organisms adapting to their internal and external environments.

- The dynamics affecting the individual human performance of tasks within organizational components or units.

- Reinforcement of observational and personal communication skills through the use of independent or group field observation and verbal and written reports.

(1) Communication in Formal Organizations
(Objectives + Outline + Content materials + References - Lecture + Seminar formats)

- Anatomy and Physiology of Organizations

  - Organizations as <u>systems</u>: boundary, equilibrium, interdependence, functional point of view.

  - <u>Determinants of behavior</u>: individual characteristics - cognition, motivation, values; social characteristics - expectations, exchange, reciprocity, group membership, norms, status.

  - <u>Technical characteristics</u>: rate of change, work flow, temporal and spatial factors.

  - <u>Organizational characteristics</u>: leadership style, organic or mechanistic structure, component task relationships.

- Behavioral Analysis

  - Actual behavior: tasks and feelings.

  - <u>Functions</u> of behavior: formal and informal goals of organization served or hindered, interactions between determinants of behavior and actual behavior.

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- Historical development and environment: adaptation as a result of cultural, political, manpower, technological, competitive, and market factors.

(2) Communication Observation in EMS
(Objectives + Outline strategy and assignments + References - Seminar format)

- Field Experience

  - Research: identification of operational, developing, or fragmented emergency medical system components, gaining access, identification, acceptance, dialogue, and closure.

  - Description: basic human tasks, individual operating units, personal and organizational goal hierarchies, technical factors in human performance, leadership styles, communication procedures.

  - Analysis: cross component similarities and differences, system model strategies, system advantages and human change requirement trade-offs.

- Human Change Strategies

  - System opposition: identification of human barriers (procedural and value oriented), anticipated argumentation and collaboration.

  - System support: identification of service improvements, benefiting populations, common goals.

  - Development: counterarguments, coordinated communication and power strategies.

(3) Observation and Analysis Reports
(Objectives + Outline of strategy and assignments - Seminar format)

- EMS Observation Model

  - Identification of elements: personnel, present tasks, function and status in community, major actors, role relationships, policy positions, present finances.

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- Rationale and selection: key personnel, collaborative plan, individual benefits, logic of individual presentations.

- Plan of reorganization: task interrelationships, coordination, funding, sequence of assimilation.

Description and Simulation

- Informative presentations: oral and written reports, group critique, panel discussions.

- Persuasive presentations: oral and written speeches, role-play scripts and presentations, adversary debates, media usage.

ADMINISTRATION: THEORY AND PRINCIPLES MODULE
(SCOPE: COMPONENTS AND UNITS)
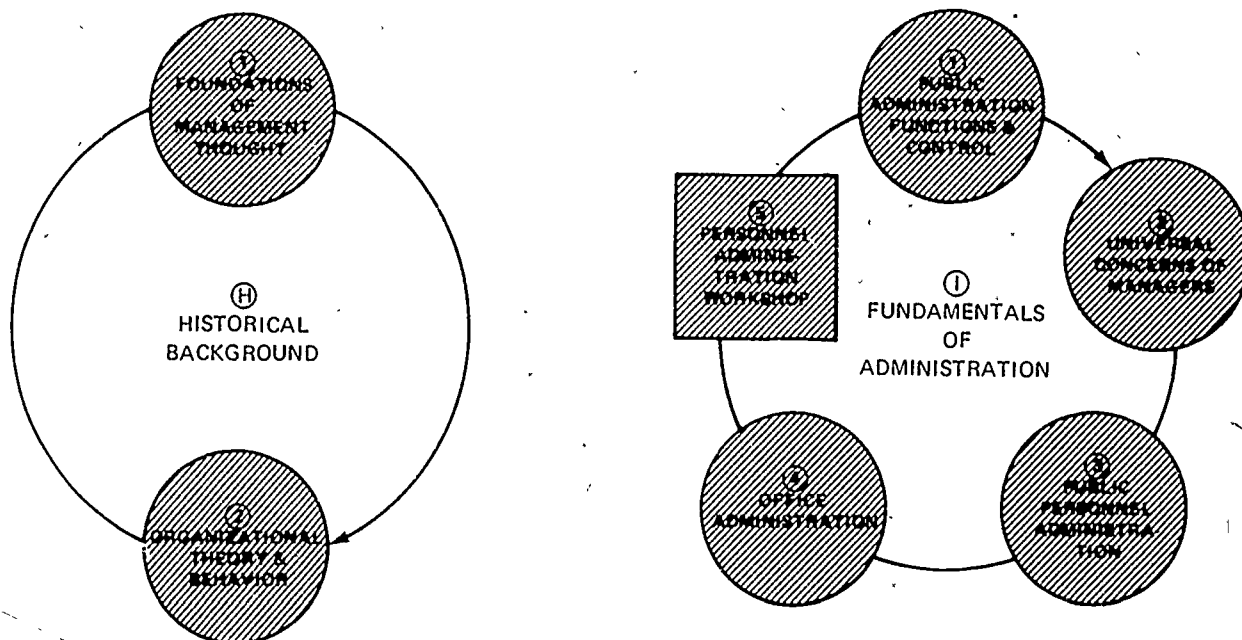
HISTORICAL BACKGROUND

FUNDAMENTALS OF ADMINISTRATION

Likely Coverage of Unit in Existing Programs

⊘ = Available at most universities

◯ = Available at universities with health care administration programs

◯ = Probably not in existing programs

QUANTITATIVE METHODS FOR ADMINISTRATORS
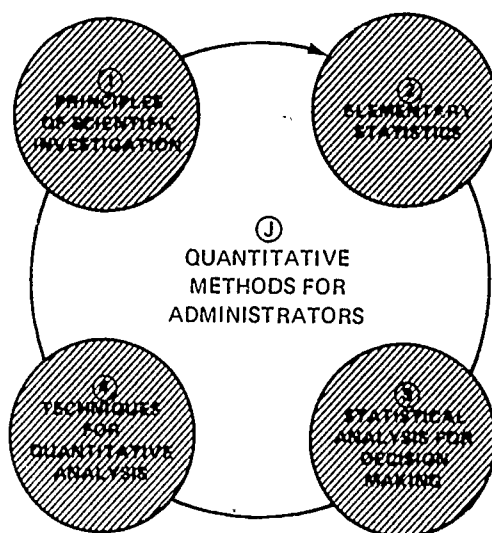
ADMINISTRATION: THEORY AND PRINCIPLES MODULE

<u>Composition:</u>   3 components, comprising 11 instructional units:

(H)   Historical Background - 2 units

(I.)   Fundamentals of Administration - 5 units

(J)   Quantitative Methods for Administrators - 4 units

<u>Objectives:</u> The basic objective of this module is to explore the role of the public administrator, as both coordinator and decision maker, to provide background for later consideration of the EMS program administrator. The responsibilities, opportunities and constraints associated with public administration are examined in the context of the evolution of management thought.

Most of the curriculum content in this module reflects the type of instruction in traditional business management curricula but adapted to problem contexts facing the public administrator of health programs. These content outlines provide a basis for understanding management principles and fundamentals, their evolution, current trends and applicability. This, in turn, provides a basis for exploring how these principles are applied to exercise effectively the management/administration skills of planning, implementation, evaluation and control.

Also, there is considerable emphasis given in this module to quantitative management techniques. However, both content and the way it is developed here is intended to focus on those approaches which are most applicable to "real-world" problems, particularly in connection with EMS system studies and program management. For example, the problem formulation and analysis using readily available computer software are far more important in practice than an understanding of the simplex algorithm and other solution techniques. There is also considerable emphasis on examples and case problems, as well as an attempt to organize the material in a manner which will stimulate student interest before introducing detailed methodology.

<u>References:</u> The following compilation of references was developed for and utilized in preparing the curriculum content described in this module. The references are listed sequentially, by unit, corresponding to the ordering of instructional units within the components of the module. For example, references identified below for unit (H 2) represent the major sources for

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(H) HISTORICAL BACKGROUND of Management

Scope: Historical concepts, philosophies and theories on which management thought is based.

- Organizational theory and contributions from the behavioral sciences.

- Evolution of similarity/contrasts in private versus public administration.

(1) Foundations of Management Thought
(Objectives + Outline + References - Lecture format)

- Evolution of Management Thought

  - The manager's job: theories traced via examination of major schools of thought and their important contributions - Classical, "Great Man" School, Entrepreneur School, Decision Theory School, Leader Effectiveness, Leader Power and Leader Behavior schools, and the Work Activity School.

  - Schools of organizational thought: discussion of theories via key problem addressed - rational model, bureaucratic model, social system, leadership, cooperative system, decision model, group bargaining and conflict, technology/contingency model.

- Private vs. Public Administration

  - Auspices and accountability.

  - Characteristics: administration, similarities and distinctions, by organizational auspices - governmental, voluntary and for profit.

  - Critique: advantages/disadvantages of administration under different auspices - governmental, voluntary and for profit.

- Examples in the Health Field: review of selected cases.

  - Steinwald and Neuhauser.

  - Odin Anderson.

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(2) Organizational Theory and Behavior
(Objectives + Outline + References - Lecture format)

- Organizations: Structure and Function

    - Definitions, distinctions between "formal" and "informal."

    - Level of the individual: perception, motivation, learning ... .

    - Level of the small group: group dynamics, intergroup conflict, leadership.

    - Level of the organization: effects of technology on structure, governance, organizational change and development ... .

- Bureaucracy

    - Weber's Bureaucratic Model: structure and operational characteristics.

    - Strengths of bureaucracy.

    - Criticisms of bureaucracy.

- The Organizing Process

    - Departmentalization: considering the process as an assignment problem.

    - Organizing by purpose vs. organizing by process.

    - Matrix organization: characteristics, strengths, weaknesses.

    - Applications to medical care: consideration of organizing inpatient units and outpatient teams.

(I) FUNDAMENTALS OF ADMINISTRATION

Scope: • The applicability of most management principles to administration in the public sector.

• Management as a universal approach to problem solving.

• Principles behind managing workers and work: personnel administration and office management.

(1) Public Administration: Functions and Control
(Objectives + Outline + Reference - Lecture + Seminar formats)

• Theme of Unit: "Management is a means to end."

- Primary function: specification of objectives, not absolute, but relative.

- Marshalling of resources: to realize objectives, similarities/differences considered for profit/nonprofit settings.

• Management Responsibilities: Decision Making and Policy Formulation: bases for policy, policy bodies in public and private organizations, considerations in selection of alternatives.

• Organization and Staffing: concepts and principles - unity of command, span of control, scalar principle, decentralization .... .

• Comparisons of Line, Staff and Functional Organization: discussions of advantages and disadvantages of each.

• Human Factors in Staffing: concepts and principles - status, role, professionalism, specialization ... .

• Organization Theories: consideration of the complexities and applicability of selected concepts.

- Authority, influence, power.

- Identification, loyalties, responsibilities.

- Matrix organization.

• Planning: elements and process.

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- Controlling: objectives and elements.

- Principles of Control

- Communicating and Directing

  - Types of communication problems.

  - Communications networks.

  - Communications barriers.

  - Elements of direction.

  - Leadership: Theory X, Theory Y.

  - Supervision.

- Exercise: construction and critique of an organization and management plan for an EMS program office.

(2) Universal Concerns of Managers
(Objectives + Outline + Reference - Lecture + Seminar formats)

- Setting Objectives: types, elements, process, strengths/weaknesses.

  - Organizational objectives.

  - Program objectives.

  - Project objectives.

- Long-Range Planning: types, elements and techniques.

- Evaluation: objectives, techniques, measures and indices, data, criteria.

- Setting Policy: objectives and processes.

- Short-Range Objectives: purpose and characteristics.

- Direction and Control: Types, characteristics and processes.

- Communications: importance and basic concepts.

- Predicting and Adapting: consideration underlying all functions.

- Exercise: development of an organization, staffing pattern and management philosophy, meeting selected constraints, for an EMS program involving EMS delivery under differing auspices.

③ Public Personnel Administration
(Objectives + Outline + References - Lecture format)

- Public Personnel Systems: characteristics, organization, history similarities and contrasts by type.

  - Civil Service.

  - Foreign Service.

  - Military.

  - U.S. Public Health Service Corps.

- Personnel Management and Policy: characteristics of the basic elements, processes, principles.

  - Personnel selection.

  - Special (legal) criteria.

  - Introduction to organization and job.

  - Employee evaluation.

- Personnel Administration: characteristics, principles and applications.

  - Personnel problems: unique to EMS.

  - Recruitment.

  - Training.

  - Placement.

- Wage and Salary Administration

  - Market factors.

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- Salary vs. fringes.

- Negotiating bodies, collective bargaining, labor relations.

- Salary-level criteria.

- Employee perceptions of income.

- Bonuses.

• Personnel Administration in the Behavioral Sciences: principles and perspectives.

- Planning factors.

- Supervision elements.

- Development and evaluation of human resources.

• Public vs. Private Manpower Policies and Programs: similarities and differences.

- "Work" concepts, roles in society.

- Private policies.

- Public policies.

- Manpower development program comparison.

• Employee-Management Relations in Government: characteristics discussed with emphasis given to differences between labor relations in the public sector, relative to private enterprise.

• Comparative Social Systems: personnel administration concepts compared, cultural dimensions highlighted.

④ Office Administration
(Objectives + Outline + References - Lecture + Seminar formats)

• Dimensions and Elements: growth of function, cost of function, organization, planning, physical facilities ... .

• Organization of the Office: general structure, services, concepts of decentralization.

- Planning.

- Work Management Techniques for Office Administration.

- Physical Facilities: general considerations and principles.

- Work Performance Factors.

- Records, Reports, Controls: roles in office administration.

(5) <u>Personnel Administration Workshop</u>
(Objectives + Outline of strategy + References - Seminar format)

- Case Studies: for synthesis and application of management concepts and principles to selected problems in personnel, communications, interagency relations, public responses, etc.

  - "Impact of Emergency Services Upon Patterns of Ambulatory Care."

  - "Medical Care Planning in a Small Urban Area."

  - "The Community Hospital."

(J) QUANTITATIVE METHODS FOR ADMINISTRATORS

Scope:
- Statistical concepts and elementary probability.

- Principles of scientific method.

- Techniques of statistical analysis for decision-making.

- Quantitative methods applicable to problems in EMS system studies and/or management.

(1) Principles of Scientific Investigation
(Objectives + Outline + References - Lecture format)

. Introduction: purpose and rationale for selection of scope of unit's coverage of material.

. Features of the Scientific Method

- Observation: importance of definitions, uniqueness in EMS.

- Hypotheses: function, importance, some exceptions.

- Essential concepts: introduction to ruling theory, working hypothesis, multiple working hypotheses.

- Ruling theory.

- Working hypothesis.

- Multiple working hypotheses.

. Ways to Change Opinion

- Method of tenacity.

- Appeal to authority.

- Intuition.

- Science: importance of quantification.

. Steps in the Scientific Method: essential steps, problem formulation emphasized, knowledge and facts.

- Nature of Research: definitions, types and aims, roles of scientific method.

(2) Elementary Statistics (selected concepts)
(Objectives + Outline + Content materials + References - Lecture format)

- Introduction: delineation of scope and rationale, objectives of statistics, basic terminology, role of statistics and representative applications ... .

  - Business.

  - Medicine: clinical, public health.

- Measurement Descriptors: definition, characteristics and use ... .

  - Frequency distributions.

  - Measures of central tendency.

  - Measures of variation.

- The Normal Distribution: definition, development and explanation.

- Probability: emphasized as a vehicle to inference.

  - Terms and symbols.

  - Fundamental rules of probability.

  - Bayes' Theorem.

- Sampling: role of sample in inference emphasized.

  - Definitions: population, sampling units, sample.

  - Simple random sample: selection process, applications.

(3) Statistical Analysis for Decision Making
(Objective + Outline + Reference - Lecture format)

- Probability and Set Theory: definitions, explanations, examples.

- "A priori."

- Subjective.

- Set theory: definitions, operations.

- Definitions via set theory.

- Fundamental rules: review.

- Counting principles and techniques.

• Discrete Random and Probability Distributions: definitions, types, characteristics.

- Random variable.

- Probability distributions: including cumulative frequency distributions.

- Probability distributions of discrete random variables: the uniform, the binomial, the Poisson.

• Sampling

- Objectives and background.

- Terms and concepts.

- Design of the sample survey.

- Methods of selecting sample data: introduction to simple random, stratified random, systematic, cluster.

- Data collection: problems and methods.

- Simple random sample: review.

- Systematic sample: comparison to simple random, procedures, applications.

• Hypothesis Testing

- Background and rationale: definitions, basic concepts, actions concerning hypotheses, states of nature.

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- <u>Hypothesis testing procedure</u>: explanation of steps, basic concepts - level of significance, decision rule, practical examples.

- Regression and Correlation Theory

  - <u>Terminology</u>: independent/dependent variables, direct/inverse relationships.

  - Scatter diagram and regression line.

  - Purposes and examples.

(4) <u>Techniques for Quantitative Analysis</u>
(Objectives + Outline + Content materials + References - Lecture + Seminar formats)

- Introduction to Quantitative Approaches for Management Decision-Making

  - <u>General perspectives</u>: definitions, concepts, practical implications - the decision process, historical developments in management thought, decision analysis.

  - <u>Decision modeling</u> - concepts and methods: overview - definitions, structure and examples, basic considerations - scientific method, hybrid science, systems approach, modeling process, modeling - benefits and limitations.

  - <u>Decision model applications</u>: "ad hoc" vs. "off-the-shelf" modeling applications (common approaches and application contexts) - resource allocation, inventory control, queuing systems, activity sequencing/coordination, routing/network flows ... .

  - <u>Health system applications</u>: case study for discussion of potential application areas - staffing, patient scheduling, etc.

- Resource Allocation With Linear Programming

  - <u>Resource allocation decisions</u>: nature, problem structure, illustrative applications - manpower planning, personnel assignment, location analysis, advertising allocation ... .

- Mathematical programming models: general
  model structure, linear programming (LP)
  model structure, sample LP problem, LP
  model formulation, LP solution, analysis -
  sensitivity and parametric studies, specialized
  mathematical programming models.

- EMS system applications: assignment problem -
  ambulance allocation, transportation problem -
  ambulance location.

- Implementation issues: validation, policy/
  practical limitations, model adaptation ... .

System Design and Evaluation With Computer Simulation
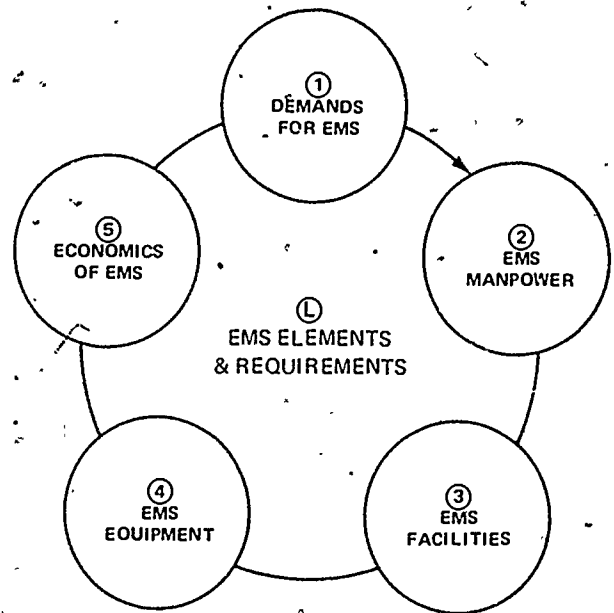
- Overview of system simulation: general nature,
  origins, optimization vs. simulation, advantages
  and limitations, guidelines for use.

- Computer simulation applications: description and
  examples of models - educational, economic analy-
  sis, industry/public sector.

- Introduction to simulation methods: basic technical
  aspects - experimental design, probability and
  statistical concepts, simulated sampling ... .

- Exercise: case example of deterministic simula-
  tion.

- Exercise: case example of Monte Carlo simulation -
  queuing systems, simulation model, simulation
  model analysis.

- EMS System planning and evaluation: case study of
  EMS system simulation methods.

- Simulation languages.

- Implementation issues: validation, experimental
  design, computational power/efficiency, size/
  scope ... .

Project Planning and Control

- Planning and control cycle: terms, concepts,
  overview.

- <u>CPM</u> and <u>PERT</u>: early developments, current characteristics.

- <u>Project planning model</u>: development process discussed via case problem illustration.

- ... <u>in practice</u>: typical applications, extensions.

- <u>Management considerations</u>: implementation, benefits and limitations, technical support.

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EMS DELIVERY: DIMENSIONS AND STATUS MODULE
(SCOPE: COMPONENTS AND UNITS)
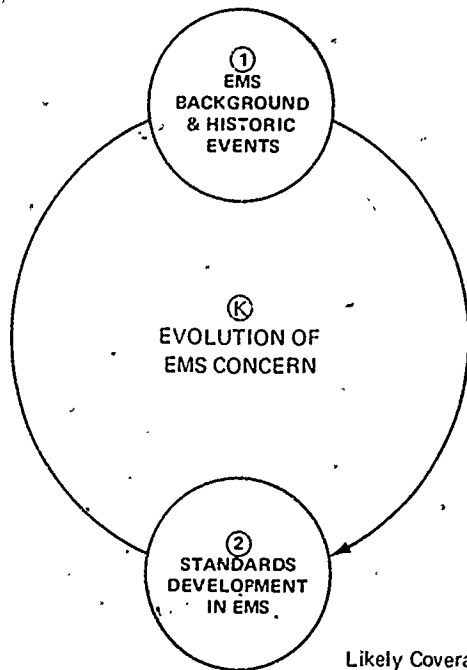
① EMS BACKGROUND & HISTORIC EVENTS

Ⓚ EVOLUTION OF EMS CONCERN

② STANDARDS DEVELOPMENT IN EMS

① DEMANDS FOR EMS

⑤ ECONOMICS OF EMS

Ⓛ EMS ELEMENTS & REQUIREMENTS

② EMS MANPOWER

④ EMS EQUIPMENT

③ EMS FACILITIES

Likely Coverage of Unit in Existing Programs

⊘ = Available at most universities

◯ = Available at universities with health care administration programs

◯ = Probably not in existing programs

① EMS DELIVERY ALTERNATIVES

Ⓜ CURRENT EMS OPERATIONS

③ EMS ANALYSIS & REPORTS WORKSHOP

② EMS FIELD OBSERVATION

① E. D. AS O.P.D.

⑦ OTHER ISSUES

② USE/ABUSE OF EAS

⑥ SAFE OPERATION OF EMERGENCY AMBS.

Ⓝ EMS ISSUES

③ ALTERNATIVES FOR EMT UTILIZATION

⑤ MEDICOLEGAL ASPECTS OF EMS

④ EMT NEED TO BE FIREMAN?
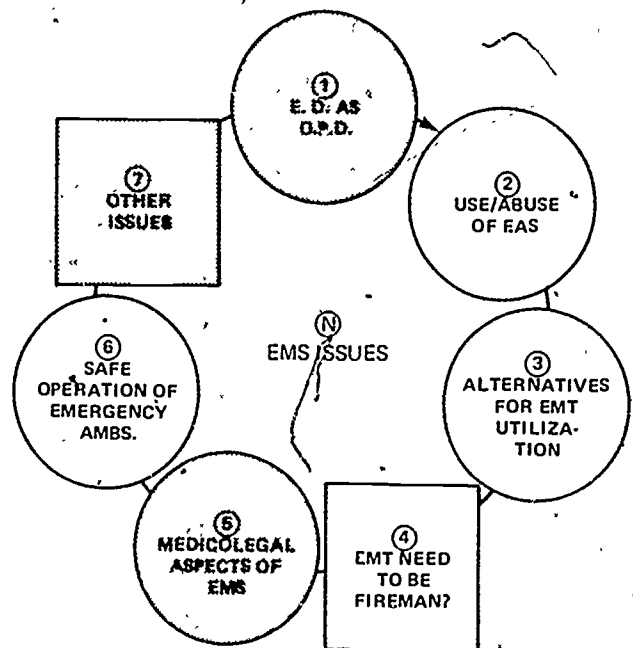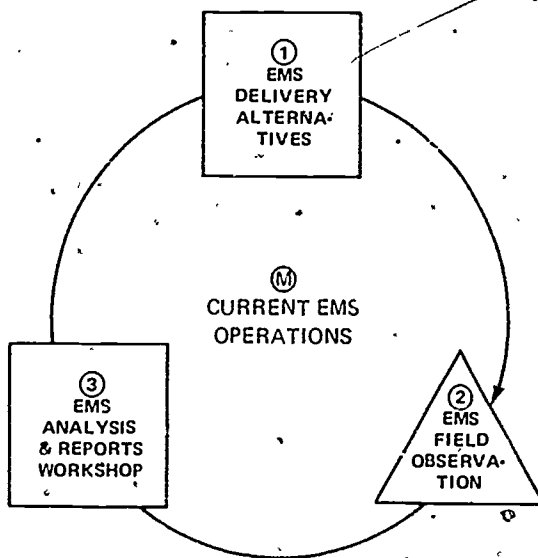
EMS DELIVERY: DIMENSIONS AND STATUS MODULE

Composition: 4 components, comprising 17 instructional units:

(K) Evolution of EMS Concern - 2 units

(L) EMS Elements and Requirements - 5 units

(M) Current EMS Operations - 3 units

(N) EMS Issues - 7 units

Objectives: This module encompasses introductory or background units on the characteristics, incidence and impact of medical emergencies and the status and recent developments in the delivery of emergency medical services.

The development of EMS background information is organized in the following general way. An initial appreciation of the characteristics of the most common time-critical medical emergencies, the appropriate emergency medical treatment procedures, and the implications of these emergencies and their proper treatment for EMS system design will be imparted to the student. Another unit presents numerical data on the incidence of different types of medical emergencies, epidemiological data on the distribution and etiology of accidents and other emergencies, and data on their economic and social impact. Another major topic is the current status and problems of EMS across the country and most recent developments in this and other countries.

These introductory units are followed by more specific instruction on EMS equipment requirements and costs, and on available and acceptable designs or models. This instruction covers all types of ambulance vehicles (including aircraft), patient handling and light rescue equipment, emergency medical treatment equipment for use in the field and in emergency rooms, communication equipment (portable, mobile and base) and record keeping equipment including tachographs, forms, audio and video tape, microfilm and computer storage. Other units are concerned with the personnel requirements and costs of EMS facilities design and operating requirements and facilities/services interfaces. Information is also provided on the facilities required to accommodate and support other components or subsystems, such as records and administration, communications and dispatch, and emergency care and patient transportation, and on the current roles of other emergency services and agencies, such as police, fire, rescue, civil defense, etc., in providing emergency medical care.

References: The following compilation of references was developed for and utilized in preparing the curriculum content described in this module. The references are listed sequentially, by unit, corresponding to the ordering of instructional units within the components of the module. For example, references identified below for unit (K 2) represent the major sources for the second unit in component (K), or, for the instructional unit entitled "Standards Development in EMS," within the "Evolution of EMS Concern" component.

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(K) EVOLUTION OF EMS CONCERN

Scope:
- Characteristics of EMS delivery before and following W. W. II.

- Impetus to change and some positive early activities regarding EMS.

- Perspective on provider concerns, EMS problems and federal legislative responses.

- Overview of the development of standards for EMS.

(1) EMS Background and Historic Events
(Objectives + Outline + References - Lecture format)

. EMS Background

- EMS prior to W. W. II: general types and characteristics of services in rural and urban areas.

- Post-W. W. II trends: distribution of physician services, fragmentation of EMS, characteristics of emergency department utilization, ambulance services, deficiencies in system elements, R&D, federal support.

- Impetus and positive activities: American College of Surgeons' guide for better regulation, establishment of task forces and committees, e. g., by National Academy of Sciences, Committee on Trauma - minimal ambulance equipment identified, emergency medical techniques endorsements ... .

- NAS/NRC report: EMS as "neglected disease," national awareness.

. EMS Problems and Provider Concerns

- Types of ambulance services and hospital roles.

- Various coverage patterns by community type.

- 24-hour service rationale.

- Economic pressures and some responses by providers.

- Definition of service areas and jurisdictional problems.

- Ambulance vehicles and staffing characteristics.

- EMS communications.

- Finances, bill collections and other major problems of commercial EMS.

- Utilization of EMS and status of public awareness.

• Federal Responsibilities and Legislation: review of characteristics and impacts

- Division of Emergency Health Services, DHEW.

- Fair Labor Standards Act (1966 Amendments).

- Medicare.

- Medicaid.

- National Highway Safety Act of 1966, Standard No. 11.

- Highway Safety Program Manual, Volume 11.

- Trends following 1966: NHTSA in DOT, Emergency Medical Services Systems Act of 1973, public awareness.

(2) Standards Development in EMS
(Objectives + Outline + References - Lecture format)

• Emergency Medical Care Training

- The early focus in EMS, due to many factors.

- 81-hour basic training program (DOT).

- 20-hour refresher training (DOT).

- Patient-handling manual (DOT).

- Development of national registry for EMT's.

- Advanced training for EMT's: NAS/NRC guide-
  lines, demonstrations of advanced care in
  selected communities, 480-hour course (DOT).

- Training of first-responders (DOT).

• Other Training (relating to emergency services)

- 10-hour dispatcher training course (DOT).

- Extrication course (DOT).

• Criteria for Ambulance Design and Equipment

- NAS/NRC: medical requirements.

- National Academy of Engineering: performance
  criteria.

- General Services Administration: federal
  ambulance specifications.

- American College of Surgeons: minimal
  equipment.

- Helicopter demonstrations: various.

• Emergency Communications

- 911 system.

- Telemetry.

- Radio communications networks.

(L) EMS ELEMENTS AND REQUIREMENTS

Scope:
- Nature of the demand for EMS, i.e., general requirements for service.

- Elements required for rendering emergency medical services.

- Economic aspects of EMS delivery.

(1) Demands for Emergency Medical Services
(Objectives + Outline + References - Lecture format)

. Basic Concepts of EMS (selected)

- Emergency: definition, examples, associated difficulties, independent probabilities, complexities of providing appropriate response.

- EMS: definitions.

- Demand vs. need: definitions, distinctions, relative scope, interrelationship, factors influencing both.

. Meaning of EMS Demands

- Definitions, examples.

- Types of EMS demands: demand components and classifications.

- Descriptive dimensions of demand: alternative categorizations - as medical incidents, by severity of condition, by type of cause, by type of illness, by location of incident, by bodily system, etc.

. Nature and Magnitude of EMS Demand

- Background data on demands for health care: national expenditures for health care, profile of demands, health care industry - volume of services.

- Magnitude of EMS demand: introduction and perspective, data on accidental injury and acute illness, rationale for demand measurement.

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- <u>Nature</u> of EMS demand: review of general
  definition, life-threatening emergencies,
  accident victims and traumatic injuries, non-
  traumatic emergencies, type of descriptive
  data.

- Guide to Defining EMS demands: classification schemes,
  methods and applications.

  - <u>Ambulance vs. "other mode"</u> arrivals at
    emergency departments.

  - <u>Types of incidents.</u>

  - <u>Types of injuries/illnesses.</u>

  - <u>Location of emergencies.</u>

  - <u>Temporal distributions.</u>

  - <u>Relationship to performance requirements for
    EMS.</u>

- Guide to Measuring EMS Demands: objectives and general
  approach to quantification.

  - <u>Factors</u> affecting EMS demand: introduction to
    nature of variation, geographic - waterways,
    highways, other transportation systems, recrea-
    tion centers, terrain, climate; demographic -
    population density, resident, institutional and
    transient populations; socio-economic - ethnicity,
    educational and income level, occupation, etc.

  - <u>Data sources</u> and quality: general objectives,
    perspective of desirable records system, prime
    sources - emergency department and emergency
    ambulance services, surveys, field work inter-
    viewing, public agencies and private associations.

(2) `EMS Manpower`
(Objectives + Outline + References - Lecture format)

- Introduction: delineation of EMS manpower, manpower
  as key item in upgrading, emergency department vs.
  emergency ambulance personnel - re roles, training,
  relationships.

- Types of EMS Personnel

  - Hospital emergency personnel.

  - Ambulance, communications, police and fire response personnel.

- Number of EMS Personnel: few data, hospital outpatient service data.

- Training of Personnel

  - Hospital emergency staff: educational levels, availability of special courses, deficiencies in availability and standardization.

  - Examples of specificity: training and experience characteristics by type of personnel.

  - Ambulance staff: types and characteristics of courses available via Red Cross, State Police, U.S. DOT, military, Civil Defense, American Academy of Orthopedic Surgeons ... .

  - Licensure vs. cerficiation.

  - Continuing education and training.

- Problems in EMS Manpower

  - Quantity, types and socio-demographic characteristics.

  - Status on experience and training.

  - Qualifications, task allocations.

  - Training for all types of emergency personnel.

- Recommendations (from Connecticut study) on Improving EMS Manpower

  - Status and major deficiencies in manpower.

  - For emergency department personnel: emphasis for emergency medical care training, recruitment of emergency department personnel, role definition ... .

- For emergency department staffing: application
  of techniques of industrial engineering, opera-
  tions analysis, role of paramedical personnel.

- For EMT's: role of community hospital in
  training, minimum standards, certification.

- For community hospitals: physician staffing of
  emergency department, attending staff practitioners,
  house staff and EMS-based M. D.'s, "on-call"
  specialists, physician staffing patterns via computer
  simulation, peak utilization periods, intern role,
  cardiac management, medical director of emergency
  department, emergency service review committee,
  continuing education base.

(3) EMS Facilities
(Objectives + Outline + Content material + References -
Lecture format)

- Facilities for EMS Response: importance, requirements
  and characteristics.

  - Ambulance transportation base.

  - Communications: "critical time" concepts,
    functions - linkage, dispatch, coordination.

  - Record Keeping: central depository, minimal
    information requirements, coordination for
    data bank.

- Requirements for Facilities

  - Space.

  - Location.

  - Equipment.

  - Transportation.

  - Record keeping.

- The Emergency Department

  - Size.

- Components.

- Location.

- Standards.

- Staffing.

- Billing.

• Regionalization and Categorization: definitions, discussions and examples.

- Comprehensive emergency treatment centers.

- Basic emergency treatment services.

④ EMS Equipment
(Objectives + Outline + References - Lecture format)

• Ambulance Specifications

- Definition of emergency ambulance.

- Development of specifications and guidelines.

- Ambulance design requirements: interior/ exterior design, security and rescue equipment, emergency care equipment and supplies, communications and documentation.

• Comparison of Typical Ambulance Vehicles: specifications, costs and performance.

• Helicopter Ambulances

• Communication Equipment: DOT Guidelines for EMS.

- Telephone systems.

- Phone patch.

- Radio patch.

- Paging systems.

- FM squelch.

- Tone-coded squelch.

- Digital encoder/decoder.

- Physiological monitoring telemetry.

• Hospital Communication Systems

- HEAR System.

- GE' System.

• Ambulance Radio Equipment

- Mobile units.

- Multichannel-synthesized.

- Two-position operation.

- Two-channel portable.

• Hospital Emergency Department Equipment

- Resuscitative and life saving: recommended essential equipments.

- Other emergency trays.

- Standard drugs, fluids, surgical supplies, etc.

- Equipment sizes.

- Radiologic and clinical lab facilities.

(5) Economics of EMS
(Objectives + Outline + References - Lecture format)

• Introduction

- Various meanings of "economics."

- Definitions in EMS context.

- EMS complexity, multiplicity: implications for economics.

- Economic aspects of EMS: system costs, costs to taxpayers, costs to patients ... .

- Source materials.

- Basic concepts and terms: financial requirements - capital vs. cash, cash flow, life-cycle costs, fixed vs. variable costs, incremental costing.

• Economics of Emergency Ambulance Services

- EAS financial aspects and provider concerns: ramifications of 24-hour service, nature of fixed operating costs, variable accounting practices, personnel costs, costs of operation by organizational type, average cost per call, collection rates and reimbursements.

- Capital requirements: start-up costs, capital sources, cash flows and capital financing.

- Costs of operation: fixed costs, variable costs, example of estimating total operating cost.

• Economics of Hospital Emergency Departments

- Utilization patterns: background and trends.

- Usage effects on organization and operation.

- Financial status.

- Relationship of emergency department with other hospital facilities and services.

- "Open door" policy: case study examination of policy effects on admissions, inpatient days, inpatient revenue, CCU/ICU utilization, overall financial impacts.

- Factors affecting financial impact of emergency department.

(M) CURRENT EMS OPERATIONS

Scope: • Current EMS delivery systems illustrating range of variation.

• Field observations, analysis and reports on actual EMS operations.

(1) EMS Delivery Alternatives
(Objective + Outline + Reference - Lecture + Seminar formats)

. Examples of Current EMS Delivery: selections illustrating possible range in variation.

- Size of area served.

- Types of EAS purveyor.

- Ambulance vehicles.

- Forms of community support.

- Emergency communications systems.

. Descriptive Dimensions for Comparison

- Size and other characteristics of service area(s).

- Population characteristics and densities.

- Types of EAS purveyors.

- EAS organizational/operational descriptions.

- Hospitals.

- EMS demands.

- Existence of special factors and problems.

- Communications and EMS operating procedures.

- EMS effectiveness, costs and problems.

(2) EMS Field Observation
(Objectives + Outline of strategy and assignments)

. Introduction: strategy and general plan.

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- Types of Field Placements: possible sites offering various perspectives of EMS delivery characteristics and problems.

  - Communications: state police, local police/fire, ambulance company dispatch office, telephone company ... .

  - Transportation: ambulance companies, police, fire.

  - Medical care: emergency department, satellite clinic, ambulance runs.

- Opportunities for analysis: outline of suggested types of field research which could be performed at each of the EMS system components - communications, transportation and medical care sites.

③ EMS Analysis and Reports Workshop
(Objectives + Outline - Seminar format)

- Student Team Assignment: definition of roles and objectives for structuring field observation experiences for reports to class.

- The Oral Report: suggested contents and organization.

  - Field site description.

  - Site relationship with EMS system.

  - Important findings.

  - Short-range, long-range recommendations.

- The Written Report: suggested contents and strategy for critique of report.

(N) EMS ISSUES

Scope: ● Selected current matters of general concern in
EMS.

● Selected trends which could affect EMS signifi-
cantly.

● Exploration of timely controversies.

(1) Emergency Departments as Outpatient Clinics
(Objectives + Outline + References - Lecture + Seminar formats)

. Historical Evolution of the Emergency Department

- Pre-W.W.II: mission and characteristics.

- Post-W.W.II: characteristics and trends.

. Factors Affecting E.D. Utilization: discussion of
specific factors and general relationships by type.

- Population.

- Physician.

- Institution.

- External.

. E.D. Classification of Accident and Illness

. E.D. Roles

- Relative to hospital.

- Relative to EMS.

. Ambulatory Care Program: objectives and desirable
attributes.

. E.D. Role in Ambulatory Care

. Current Trends and the Future

(2) Use/Abuse of Emergency Ambulances
(Objectives + Outline + References - Lecture + Seminar formats)

- Introduction: concept of "optimal" ambulance use, uncontrollable variables in demand.

- Types of EAS Use

  - Methods for defining.

  - Types of services provided by EAS.

  - Essence of an emergency call.

  - Typology for describing EAS use.

- Issues and Ambulance Use: consideration of various aspects of selected current issues.

  - Training and skill of ambulance personnel vs. number of calls serviced.

  - Volunteer services vs. commercial vs. municipal.

  - Unionization.

  - Vehicle dispatch.

- Abuse of EAS: definitional complexity, "medical necessity," frequently held beliefs.

- Optimization of Ambulance Use: factors contributing to appropriate use.

(3) Alternatives for EMT Utilization
(Objectives + Outline + References - Lecture + Seminar formats)

- Background: rationale for "low" utilization of EMT's in a well designed EMSS, objectives behind supplementary utilization, analytic framework.

- Advantages/Disadvantages of Alternative Utilizations

  - EMT renders both EAS and routine transfer services.

  - EMT as fireman.

- EMT as policeman.

- EMT in secondary commercial business, e.g., hospital supplies.

- Personal development opportunities for EMT.

- Enlargement, regionalization of EAS service areas.

- EMT as hospital orderly.

④ EMT Need to be Fireman?
(Objectives + Outline - Seminar format)

• Introduction: issue context, debate of positions

• Pro: position arguments.

• Con: position arguments.

⑤ Medicolegal Aspects of EMS
(Objectives + Outline + References - Lecture + Seminar formats)

• Physician's Duty to Render Care

- Medical profession definition.

- Legal sources of duty: common law, statutory responsibility.

• Legal Dangers Behind Emergency Medical Care

- Dangers to the physician.

- To non-physician medical care providers.

- "Good Samaritan" statutes.

- Legislative trends.

• Authorization of Medical Treatment

- Need for consent (Georgetown College case).

- Recovery for value of services rendered (Cotnan vs. Wisdom)

- Hospital's Duty to Render Emergency Care

    - Common law bases. (Wilmington General Hospital vs. Manlove).

    - Statutory bases.

- Rendering Care Under Emergency Conditions: American College of Surgeons - "15-minute rule," JCAH standards, Medicare, special procedures, liability potential

(6) Safe Operation of Emergency Ambulances
(Objectives + Outline + Content Materials + References - Lecture + Seminar formats)

- The Speeding Ambulance

    - Stereotype of irresponsibility.

    - Accident frequency and pattern.

    - Standards for safe operation (DOT).

    - Perspective of ambulance operator.

    - Medical community's views.

    - Coordinated EMS discourages speeding ambulance.

- Use of Lights and Siren

    - Origins.

    - UVS recommendations in the 1930's.

    - Reported current practices.

    - Audio/visual characteristics and standardization.

    - Effects of unrestricted use.

    - National Safety Council guidelines.

    - Recommendations of UVC.

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- Preemptive Traffic Control Devices: objectives, technology, operational characteristics and costs.

- Emergency Vehicle Driver Training

  - Statement of need.

  - National Committee for Uniform Traffic Laws and Ordinances (NCUTLO).

  - Complexity of skill and judgment required.

  - Police/fire driver training.

  - DOT EMT-I training course coverage of emergency vehicle operation.

  - A cost/benefit view.

- Vehicle Maintenance: importance, common causes of failure, suggested role of EMT, maintenance protocols.

- Uniform Vehicle Code: origins, definitions, organization and operation.

  - The NCUTLO: membership, mission, procedures.

  - Rules of the road and emergency vehicles.

  - Section 15-111: local and state powers.

  - Comparison of state laws to UVS.

(7) Other Issues in EMS
(Objectives + Outline of topics + References - Seminar format)

- Listing of additional timely topics

  - Forms - red tape vs. essential data.

  - Are uniform EMS standards feasible?

  - Should EMT's unionize?

  - Is there a place for profits in EMS?

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EMS DELIVERY SYSTEMS MODULE
(SCOPE: COMPONENTS AND UNITS)
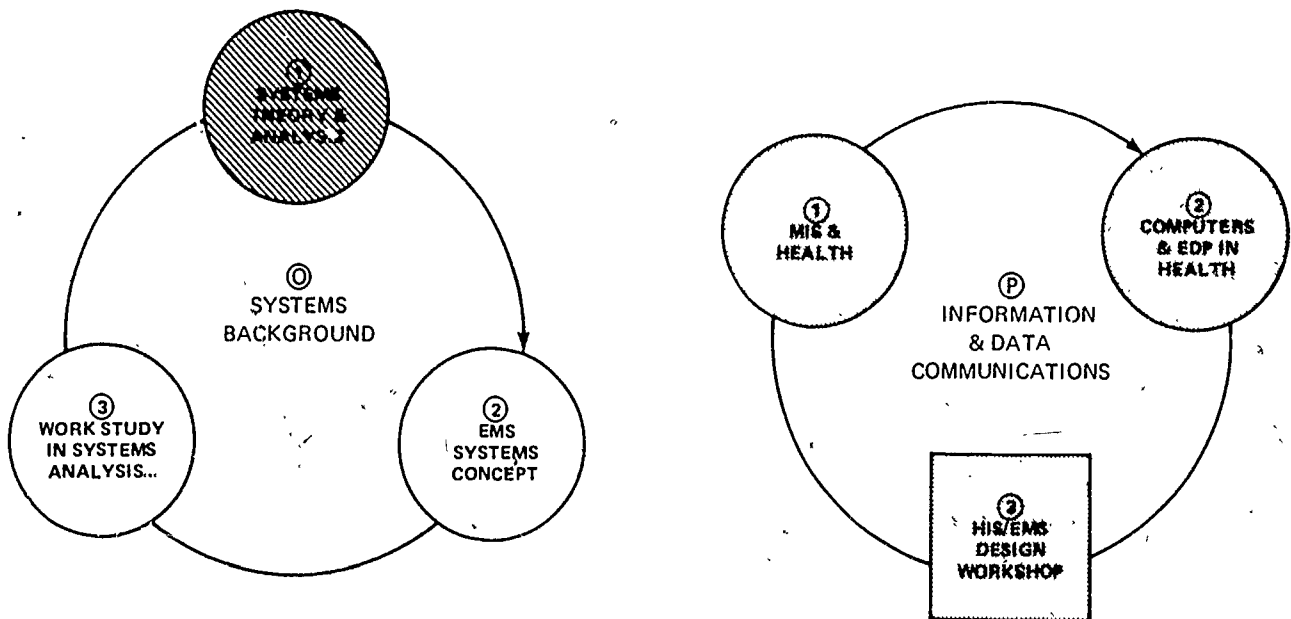
Likely Coverage of Unit in Existing Programs

◫ = Available at most universities

◯ = Available at universities with health care administration programs

◯ = Probably not in existing programs
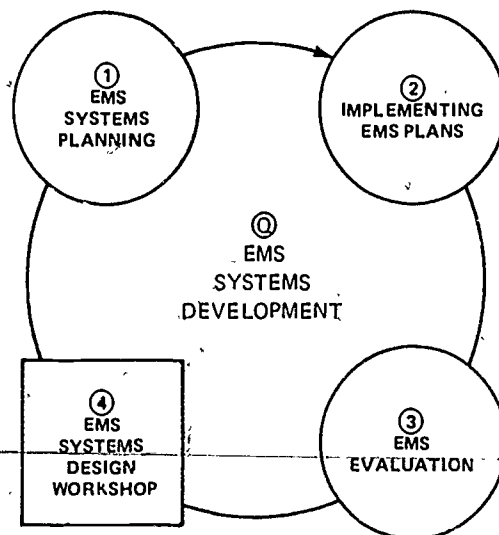
Composition: 3 components, comprising 10 instructional units:

(O) Systems Background - 3 units

(P) Information and Data Communications - 3 units

(Q) EMS System Development - 4 units

Objectives: This module is composed of instructional units designed to familiarize the student with the systems concept applied to EMS planning, development and evaluation. Information and data communications (component (P)) represents a key, pivotal role with respect to the other two components of the module. That is, the content material presented in this component focuses on information systems requirements for effecting integrated, coordinated EMS systems.

The overall intent of this module is to offer the opportunity to explore the significance of the systems approach to the establishment and management of new organizations and arrangements for the delivery of emergency medical care, including the preparation of system specifications, operating procedures and performance standards, and record keeping and reporting requirements.

The final component in this module addresses aspects of changing over to a system's organization of EMS, including possible operational, administrative and financial interface problems among subsystems, especially when their EMS functions are shared with other external functions, such as police, fire, private business, non-emergency medical care, or with other external organizations, systems and services, such as civil defense and emergency preparedness, coroner, welfare and social services, American Red Cross Society, Coast Guard, etc. Unit topics on external relationships also cover all aspects of the EMS system's interactions with the general public, and the need to educate the public about their own EMS responsibilities and roles. Other units explore the costs of improved and integrated EMS systems, alternative sources of funding and examine various configurations or arrangements for multiple methods of funding employed by some states and communities.

References: The following compilation of references was developed for and utilized in preparing the curriculum content described in this module. The references are listed sequentially, by unit, corresponding to the ordering of instructional units within the components of the module. For example,

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(0) SYSTEMS BACKGROUND

Scope: • Basic concepts, principles and general methodology of the systems approach.

• Adaptation of systems approach to the study and design of emergency medical services.

• A general, systematic approach to problem solving with broad application to health systems planning.

(1) Systems Theory and Analysis
(Objectives + Outline + References - Lecture + Seminar formats)

• Introduction to Systems Theory and Concepts

  - System definitions.

  - Basic systems concepts.

  - General Systems Theory.

  - Systems theory and organizations.

  - Systems concepts and management: re management activities and organizational subsystems/managerial tasks.

  - Systems approach: systems philosophy, systems analysis, systems management.

• Systems Analysis and Design

  - Systems decision making.

  - Basic features: goal orientation, total system perspective, model building.

  - A general framework: initial considerations, systems analysis process, systems analysis case illustration.

  - Systems design criteria.

  - Flow concepts.

- Systems Evaluation

  - Basic concepts: monitoring, feedback, measures of performance, etc.

  - Measurement: objective/subjective, quantitative/qualitative, measurement scales.

  - Evaluation process.

  - Evaluation issues: trade-offs, costs/benefits ... .

- Health Services Delivery as a Formal System: framework suggested for class discussion of a case illustration.

  - System objectives.

  - System environment.

  - Boundaries.

  - Related systems.

  - Subsystems and interrelationships.

  - Resources.

  - Components.

  - Flows.

  - Performance evaluation.

(2) EMS Systems Concept
(Objectives + Outline + References - Lecture format)

- Introduction: definitions, system boundaries, EMS system; EMS inputs, outputs.

- EMS System Elements and Components

  - Basic system resources.

  - Medical treatment facilities.

  - Medical personnel.

  - EMS subsystems.

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- Roles of planning, coordination, communications and control.

. Systems Concept Applied to EMS

- Planning EMS systems.

- Organization: systems approach to subsystem interrelationships, organizing process applied to EMS.

- Control.

- Communication.

. Considerations in Developing EMS Systems

- Baseline information.

- Utilization.

- System evaluation criteria.

- System outcome measures.

.. EMS and environmental diversity.

- Size and level of service.

(3) Work Study in Systems Analysis and Decision Making
(Objectives + Outline + Content materials + References - Lecture format)

. Introduction: origins, definitions and basic concepts.

- Work Study Technology.

- Design Work Study.

- Work Study and management.

- Keystones of the approach: discipline, method, dynamics, concept, application, spectrum.

- As synthesis of Method Study and Work Measurement.

• Method Study

 - Definition and background.

 - <u>Rationale</u>: systematic use of perception, retention, reason, imagination, judgment.

 - <u>Comparison</u> of three approaches to problem solving: psychological, "Free Wheeling," Method Study.

 - Questioning process for facts.

 - <u>Method study steps</u>: introduction to steps - select, record, examine, create, evaluate, develop.

• Select: process of problem identification..

• Record: process of information collection.

 - Operational Sequence Diagram.

 - Functional Sequence Diagram.

 - Flow diagrams.

 - Critical Examination Chart.

• Examine: process of combining objective attitude and logical, systematic approach.

 - Objectives of critical examination.

• Create: process for generating alternatives.

 - Creativity in Method Study.

 - Technique for generating ideas.

 - Role of group participation.

• Evaluate: a decision-making step in Method Study.

 - Suggested approach.

 - Evaluation criteria.

- The Matrix Display Technique.

- Establishment of ranges.

- Weighing factors.

- Selection of "best" alternative.

Examples of Evaluative Criteria

(P) INFORMATION AND DATA COMMUNICATIONS.

   Scope: • The terminology, concepts and principles under-
           lying information/communications theory.

         • Application of selected concepts in information
           theory and communications science to health infor-
           mation systems.

         • Introduction to computer technology and its appli-
           cation to information systems in health care.

(1) Management Information Systems and Health
   (Objectives + Outline + Content materials + References -
   Lecture format)

   • Communication

     - Definitions and importance.

     - Organization as a communications network.

   • Information

     - Scope of information.

     - Function of information.

     - Structure of information networks.

     - Provision of information: purposes, informa-
       tion sources and users, important considerations,
       form for provision, steps in provision.

     - Management: introduction to managerial decision
       making and MIS.

   • Management Information Systems (MIS)

     - Definition and scope.

     - Focus and purpose of MIS.

     - Dimensions of information relating to MIS.

- Relationship between <u>computers and MIS</u>: evolution, types of EDP growth - growth of applications, growth of personnel specialization, management techniques, stages of MIS growth - initiation, expansion, formalization, maturity.

- <u>Planning and control</u>: concepts of basic and multiple feedback loops.

- Design process.

. Health Information Systems (HIS)

- <u>Status</u>: review of applications in hospital, insurance and governmental settings.

- <u>Potential applications</u> for hospital information system: business office, laboratory data processing, registry and index, administrative controls, patient care records.

. Advanced Information System for Hospital Planning and Control: study of two case illustrations.

- <u>CUPIS</u> - Connecticut Utilization and Patient Information Study: organization, planned output, input ... .

- <u>BURP</u> - Basic Utilization Review Program: the model and explanation.

(2) <u>Computers and EDP in Health</u>
(Objectives + Outline + References - Lecture format)

. Introduction: social impact of computers, EDP terminology.

. The Computer

- Powers and limitations.

- <u>Evolution</u>: music making, arithmetic machines, card machines, automatic sequence computing, internally programmed machine.

- Examples.

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- Computing Hardware.

  - Encoding systems.

  - Memory systems.

  - Input/output devices.

  - Machine capabilities.

- Communications and Consoles

  - Consoles and displays.

  - Digital communications systems.

- Software

  - System software.

  - Programming languages.

  - Computer types.

  - Operating systems.

  - Availability and time sharing.

  - Management information system.

- Personnel: occupational classes in computer technology.

- Health-related Utilization of EDP

  - Hospital management.

  - Medical records.

  - Treatment and research.

  - Laboratories.

  - Clinical diagnosis.

  - Others.

(3) Health Information System (HIS)/EMS Design
(Objectives + Outline + References - Seminar format)

Review of Communications Concepts

- Practical Exercises: case examples for exploring the relationship between the psychology of human nature and effective management communication.

- MIS: review of terminology, concepts and elements of MIS.

- Methods, Procedures and Systems of MIS: review of case examples for analysis of problems associated with the design and implementation of MIS.

- Development of MIS for EMS

  - Consideration of "ideal" and necessary basic information and issues - auspices for MIS, funding, hardware and software requirements, benefits, participating agencies, etc.

Q EMS SYSTEM DEVELOPMENT

Scope:
- Planning and designing effective, coordinated EMS systems.

- Implementing EMS system plans.

- Concepts, methods and techniques for EMS system evaluation.

1 EMS Systems Planning
(Objectives + Outline + References - Lecture format)

- Introduction: basic concepts and application of planning principles germane to EMS.

  - The planning process: description of a framework.

  - Program planning vs. community planning: delineation of scope, distinctions.

  - Responsibilities for community - and program planning: role examples, need for cooperation, importance of each role.

- Development of an EMS Plan - Descriptive analysis phase

  - Definition of broad EMS goals: based upon assessment and projection of status of EMS in service area.

  - Definition of short- and long-range objectives: based upon identified needs.

  - Definition of priorities for action: based upon importance of objectives regarding needs.

- Development of an EMS Plan - Normative or prescriptive phase

  - Modeling of EMS system: based upon descriptive analysis phase.

  - Organizing the planning process: composition of agency membership, administrative structure, staff background and experience.

- <u>Data collection</u> and analysis: required types of data, uses of data, need for continuing reporting and development of an information system.

- <u>Goal establishment</u>: process, required specificity, need for re-evaluation and re-definition.

- <u>Priority development</u> and assessment of alternatives: difficulty and importance highlighted, problem-solving techniques.

- <u>Recommendations</u> for action: establishing procedures for accomplishing objectives, specificity development.

(2) <u>Implementing EMS Plans</u>
(Objectives + Outline + References - Lecture format)

- Introduction: implementation makes planning worthwhile, importance of involvement, role of the planning specialist, initial steps for successful implementation.

- Approaches to Developing an (Implementable) Plan for EMS

    - <u>Centralized vs. decentralized planning.</u>

    - <u>Councils</u>: rationale, requirements for success, purposes, membership, procedures.

    - <u>Organization</u>: to provide for cyclic and continuous planning process.

    - <u>Accountability</u>: aspects of community planning, provider/consumer cooperation, council role.

- Review of the Planning Process: consideration of the steps with respect to implementation requirements

(3) <u>Emergency Medical Services Evaluation</u>
(Objectives + Outline + References - Lecture format)

- Introduction

    - Place of EMS in U.S. Health care system.

    - Federal Highway Safety Act of 1966.

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- Emergency Medical Services System Act of
  1973.

. Previous Evaluative Studies

- Local surveys: various studies of specific
  communities and states.

- Operations research: review of studies
  applying O.R. techniques, e.g., simulation,
  cost-effectiveness, system modeling, queuing
  theory, etc.

- Case studies: National Association of Counties
  study of EAS.

- Field survey and evaluation team: work of
  Computer Sciences Corp.

- Weaknesses of previous studies.

• Existing Evaluative Guidelines:

- Comparison of similarities and contrasts
  among guidelines.

- DHEW.

- American Hospital Association.

- American Medical Association.

- American College of Surgeons.

- Joint Commission on Accreditation of Hospitals.

• EMS Evaluation Approaches and Techniques: baseline
  and ongoing evaluations from a community standpoint.

- Resources baseline information: hospital and
  ambulance resources, resource to population
  ratios, human resources availability.

- Need and demand data: definitions, uses, sources.

- Resource utilization: baseline on ambulance utili-
  zation measures, hospital utilization, utilization
  evaluation criteria, derived indices.

- Outcome measures: difficult baseline, importance and suggested measures.

- Ongoing or program evaluation: activities to be evaluated, assumption, types of comparisons.

- Other evaluative activities.

④ EMS Systems Design Workshop
(Objectives + Outline + References - Seminar format)

• Research and analysis, on team basis, to be assigned from selected problem areas requiring improved system designs for presentation and critique.

- Coronary care ambulances.

- Soviet system of emergency ambulances.

- Hospital emergency services.

- EMS system alternatives for coronary care.

- Staffing requirements.

- Proposal development.

- Political processes.

EMS PROGRAM ADMINISTRATION MODULE
(SCOPE: COMPONENTS AND UNITS)
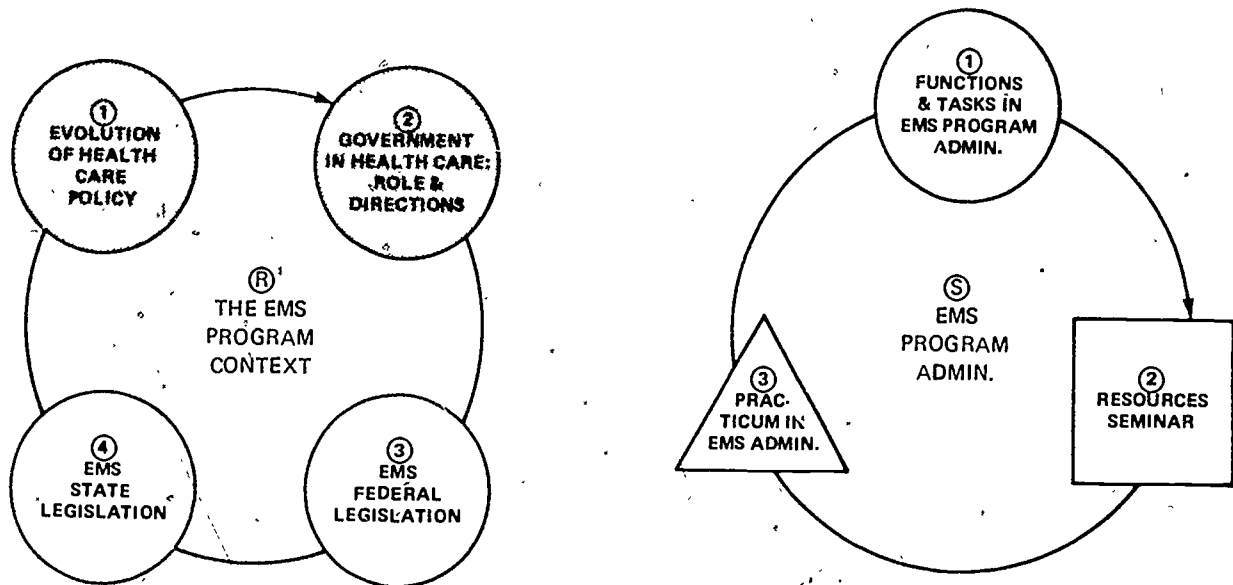
① EVOLUTION OF HEALTH CARE POLICY

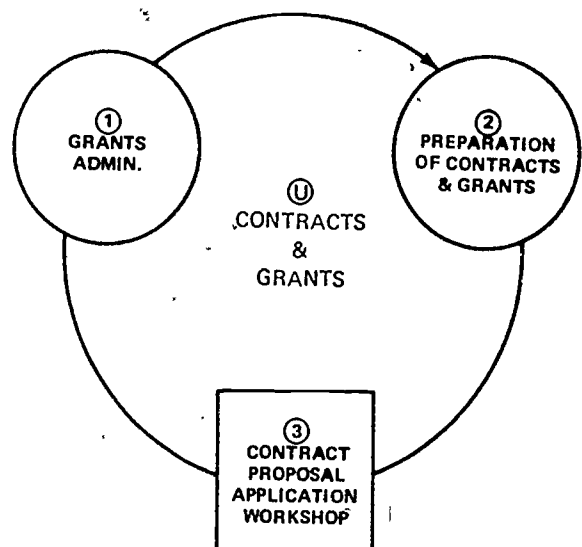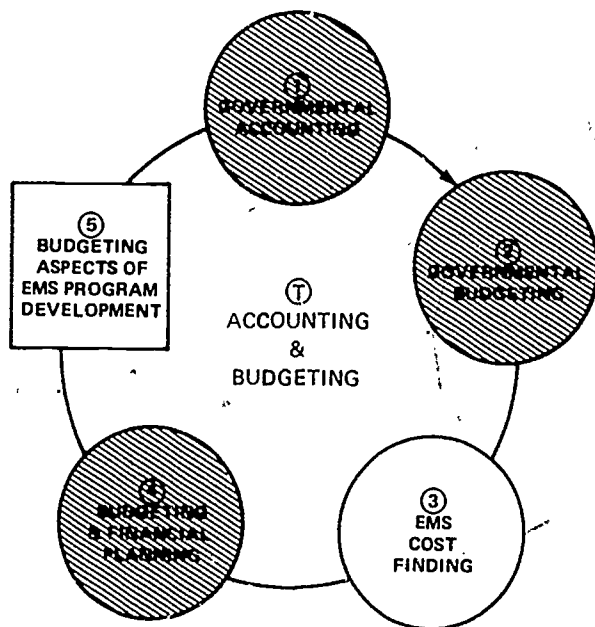② GOVERNMENT IN HEALTH CARE: ROLE & DIRECTIONS

Ⓡ THE EMS PROGRAM CONTEXT

④ EMS STATE LEGISLATION

③ EMS FEDERAL LEGISLATION

① FUNCTIONS & TASKS IN EMS PROGRAM ADMIN.

Ⓢ EMS PROGRAM ADMIN.

③ PRACTICUM IN EMS ADMIN.

② RESOURCES SEMINAR

Likely Coverage of Unit in Existing Programs

◍ = Available at most universities
◯ = Available at universities with health care administration programs
◯ = Probably not in existing programs

① GOVERNMENTAL ACCOUNTING

⑤ BUDGETING ASPECTS OF EMS PROGRAM DEVELOPMENT

Ⓣ ACCOUNTING & BUDGETING

② GOVERNMENTAL BUDGETING

④ BUDGETING & FINANCIAL PLANNING

③ EMS COST FINDING

① GRANTS ADMIN.

Ⓤ CONTRACTS & GRANTS

② PREPARATION OF CONTRACTS & GRANTS

③ CONTRACT PROPOSAL APPLICATION WORKSHOP

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EMS PROGRAM ADMINISTRATION MODULE

Composition: 4 components, comprising 15 instructional units:

    (R) The EMS Program Context - 4 units

    (S) EMS Program Administration - 3 units

    (T) Accounting and Budgeting - 5 units

    (U) Contracts and Grants - 3 units

Objectives: This final module of the curriculum presents content areas which offer a variety of opportunities for synthesizing the whole program of instruction. Each component of the module consists of instructional units which address one or more phases or aspects of either the job of the EMS program administrator or the governmental context in which he works. The principal objective of these units is to enhance the realism in problem applications areas and to serve as a bridge from professional training to the real world of EMS program administration.

The rationale for overall content development within the module is to facilitate examination of the job requirements in EMS administration with increasing specificity. For example, the first component of the module builds directly on the material covered in the Government and Health Care Module. However, this building process is not one of expanding the scope of the Government and Health Care Module; rather it is one which involves building a different kind of perspective on similar content areas. The objective here is to bring government structure, processes and roles in health care into specific focus regarding the implications for EMS program administration. In this way, component (R) can be viewed as defining the program context or dimensionalizing the organizational constraints on EMS program administrators.

The second component describes various kinds of instructional units which are designed to develop an understanding of the diversity of possible EMS administrator jobs. Also, the component includes close examination of some of the specific functions and tasks the administrator may be required to perform. Components (T) and (U) focus on two of the functions for which the EMS administrator will surely be responsible - budgeting and grants. These final components, in addition to the field practicum and communications experiences, represent curriculum content areas which are especially critical to job performance.

References: The following compilation of references was developed for and utilized in preparing the curriculum content described in this module. The references are listed sequentially, by unit, corresponding to the ordering of instructional units within the components of the module. For example, references identified below for unit (R3) represent the major sources for the third unit in component (R), or, the instructional unit entitled "EMS Legislation," within the "EMS Program context" component.

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Department of Health, Education and Welfare and U.S.
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Washington: National Graduate University, 1972.

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(R) THE EMS PROGRAM CONTEXT

Scope: • Evolution of federal involvement in health care and major legislative actions.

• Government and health care provider roles in affecting EMS.

• The federal and state legislative contexts for EMS program administration.

(1) Evolution of Health Care Policy
(Objectives + Outline - Lecture format)

• Initial Thrust of Health Legislation (1935-1945)

- Events prior to 1935: Merchant Marine Service, local health departments, National Quarantine Act, Food and Drug Act, the Committee on the Costs of Medical Care, categorical grants-in-aid - Maternal and Child Health Grants and Grants-in-Aid for Public Health Service, health as a private concern.

- Policy modifications: national policy changes 1935-45, events during the Roosevelt Administration.

• Decades of Investment (1946-1963)

- Post W. W. II change in direction: public responsibility for development of resources, investments in knowledge, facilities, equipment and health manpower.

- Facilities and equipment: Hospital Survey and Construction Act of 1946, areawide hospital planning amendment in 1964.

- Biomedical knowledge: National Institutes of Health.

- Health manpower: education and training of health manpower, particularly physicians proposed in 1940's, National Institutes of Mental Health, Public Health Service Act in 1956, educational facilities construction program in 1963, curriculum development in 1965, Nurse Training Act in 1964, Comprehensive Health Manpower Act, Allied Health Personnel Training Act of 1966.

- Years of Ferment (1963-1966)

  - New focus: federal attention to organization, delivery and financing of health care, pluralism.

  - Financing mechanisms: Kerr-Mills bill (1960) and Medicaid, Forand Bill, King-Anderson Bill, Social Security Amendments of 1965.

  - Patterns of organizations: community mental health centers, health services for mothers and children, OEO neighborhood health centers, regional medical programs, Partnership for Health, Comprehensive health planning.

- Decade of Transition (1966-1976)

  - Legislative activity in health affairs: Social Security Amendments of 1972, Comprehensive Health Manpower Act, Health Maintenance Organizations, Health Policy and Health Development Act of 1974.

  - Administrative progress: Experimental Medical Care Review Organization, Experimental Health Care Delivery Systems, Academic Health Education Centers, Emergency Medical Care Systems.

- National Health Insurance (NHI): criteria, specific proposals.

  - AMA Medicredit.

  - AHA Ameriplan.

  - Health Insurance Association of America.

  - Rockefeller proposal.

  - Kennedy-Griffith proposal.

  - Long-Ribicoff.

  - Nixon proposal.

  - Kennedy-Mills proposal.

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National Health Care Systems: emphasis on social institutions and public accountability.

- Health Services utilities.

- Comprehensive health care corporations.

- Public service health systems.

- Regional health systems foundations.

- Franchised health service conglomerates.

(2) Government in Health Care: Role and Directions
(Objectives + Outline + References - Lecture format)

· Present Roles of Government: review of categorical grants-in-aid, resource development, delivery system - financing, planning, organization and delivery, probable future directions.

· Emerging Roles of Government

- Planning.

- Resource allocation.

- Regulation.

- Rate setting.

- Quality monitoring.

- Guaranteeing financing.

- Evaluation.

- Franchising.

· Perspectives for the Future

- Partnerships.

- Insurance company investments.

- Dynamic tension.

- Accountability.

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- Equity and excellence.

- Lack of market.

• Implications of National Health Insurance: for federal, state and local government.

- Kennedy-Mills.

- Long-Ribicoff.

- Kennedy.

• Comparative Systems: government roles.

- United Kingdom.

- Sweden.

- West Germany.

• Government/Private Sector Interaction at the Municipal Level: N.Y. Hospital Corporation, N.Y. Health Services Administration.

(3) Emergency Medical Services Federal Legislation
(Outline + Content materials + References - Lecture format)

• Highway Safety Act of 1966

- Concern and intent of Congress: new emphasis on emergency services (House Report No. 1700), U.S. Code, Section 101, Section 307 of Title 23, Standard No. 11 as a milestone.

- Important Sections of the Act: Section 404, Section 403, Section 402, 402 requirements for states, responses to requirements, national emergency facilities system, Highway Safety Program Manuals.

- Funding criteria and activities covered under Section 402.

• Emergency Medical Services Act of 1973

    - **Background**: national awareness, public and
      private sector influences, objectives of the
      Act, community power, emphasis on coordina-
      tion, basic purpose of the Act.

    - The **Federal Role**: assistance for community
      action, general requirements.

    - Public Health Services Act.

    - Appropriation and funding criteria.

    - Priority grants and contracts.

    - **Funding** authorities and explanation of funding:
      planning, implementation, expansion, research,
      training, exceptional need.

    - Applicant requirements.

    - **Elements of plan**: community participation,
      training, communications, transportation,
      facilities, transfer, public information system,
      independent review and evaluation, data, mass
      disasters ... .

    - **Federal structure**: the Inter-Agency Committee
      on Emergency Medical Services - composition,
      membership, functions.

    - **Program administration**: Health Services
      Administration, Health Resources Administration,
      DHEW regional offices, the Regional Health
      Administration, Interagency Committee on EMS
      responsibilities.

(4) **Emergency Medical Services State Legislation**
(Objectives + Outline + References - Lecture format)

    • General Characteristics of State Legislative
    Progress: diversity emphasized.

    • Highlights of State EMS Legislation.

    - Summary of national progress and status.

- States progress summarized for selected
  dimensions relative to a particular state under
  consideration.

• Detailed Review of Legislation: several optional
  approaches suggested for an intensive study of enacted
  and pending legislation in particular state(s).

• Nature of State EMS Statutes: scope and prevalence of
  coverage regarding:

  - Regulating ambulance services.

  - Classification of ambulance vehicles.

  - Ambulance design or equipment.

  - Training of ambulance personnel.

  - Ambulance service advisory committee.

  - Ambulance communications.

  - State ambulance commission.

  - State department of health role.

  - Authority to operate EMS.

  - Specialized ambulance services.

  - Licensing of ambulance personnel.

  - Privileges of emergency response.

  - Licensing of hospitals.

  - Emergency hospital wards.

  - Hospital advisory council.

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(S) EMS PROGRAM ADMINISTRATION

Scope:
- Functions and tasks in EMS administration, both on a conceptual level and from a practical perspective.

- Basic reference materials for EMS administration.

(1) Functions and Tasks in EMS Administration
(Objectives + Outline + References - Lecture format)

- General Description

  - <u>Diversity</u> in roles, responsibilities and tasks among EMS administrators.

  - <u>Factors</u> contributing to diversity of function.

- EMS Program Planning: tasks by major subfunction.

  - Conduct research.

  - Prepare documentation.

- Implementation (EMS System Development)

  - Establish program organization.

  - Document system requirements.

  - Consult/assist/advise.

  - Upgrade EMS personnel.

  - Educate public.

  - Prepare proposals/grant applications.

- Control (EMS Coordination/Evaluation)

  - Manage EMS program office.

  - Coordinate/assist in EMS system development.

  - Monitor EMS developments.

  - Evaluate EMS program and system performance.

- Promote EMS research and development.

- Knowledge and Skill Requirements

- Perspective

(2) Resources Seminar
(Objectives + Outline of strategy and assignments -
Seminar format)

- Review of Documents: assessment of reference
materials in the training program.

- Selection of Primary References: student to individually
evaluate reference and guidance materials and, then,
select preferences.

- Development of Administrator's "Bookshelf": on a
collective basis, students will determine the primary
references needed for the job of EMS administration.

(3) Practicum in EMS Administration
(Objectives + Outline of strategy and assignments - Seminar
format)

- EMS Administrator Sites: perspective of the EMS
administration from various levels of government -
state program office, office of regional EMS adminis-
trator, community EMS administration.

- Alternative Roles in EMS Administration: opportunity
to observe the various roles which the administrator
must assume in different situations, and to study
associated problems.

- Functions and Tasks of EMS Administration: oppor-
tunity to apply principles and fundamentals to the
specific tasks which arise during the practicum
experience, the integration and application of skills
and knowledge to real world problems.

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(T) ACCOUNTING AND BUDGETING

Scope: • Concepts, principles and recording practices involved in governmental accounting.

• Terms and concepts relating to the preparation, development and presentation of a budget.

• Perspective of a budget as a declaration of public policy and priority and the federal budgetary process.

• Basic financial terms and techniques for measurement.

(1) Governmental Accounting
(Objectives + Outline + References - Lecture format)

. Basic Issues

- Traditional budget process.

- PPB process.

. Underlying Concepts and Principles

- Cost basis.

- Accrual basis.

. Appropriations

- Definitions.

- Objectives and need in a governmental setting.

- Appropriation accounts and the Double Entry Method.

. Encumbrances

- The Carry-Forward problem.

- Problems of commitments under one-year appropriations.

(2) Governmental Budgeting
(Objectives + Outline + Content materials + References -
Lecture + Seminar formats)

- Budgetary Process in Government: introduction to a
  complex topic.

- Budgeting as Resource Allocation

  - Basic elements of a household budget:
    priorities, income, expenditures, debts,
    resource allocation, decisions of choice,
    determination of values.

  - Governmental budgeting and collective values.

  - Budgeting at the margin.

- Politics of Budgetary Process

  - Formulation of the Executive Budget.

  - Congressional action on appropriations.

  - Execution of enacted budgets.

  - Examples: selected materials, relevant to EMS,
    drawn from hearings of Appropriation Committees
    in the House and Senate.

- Planning - Programming - Budgeting (PPBS)

  - Evolution: the continuing process of reforms
    in budgeting.

  - Attempt to encompass complexity.

  - Ingredients of PPBS.

  - PPBS concepts.

  - Examples: PPBS and EMS examined via selected
    review of HEW program structure, motor vehicle
    accident (program analysis), evaluation protocol.

• Appalachian Health Programs: a budgetary exercise
focusing on EMS within the specific context of Appalachia,
budget preparation with commentary on program specifics
and development of budgeting tables for a 5-year planning
horizon.

(3) EMS Cost Finding
(Objectives + Outline + References - Lecture format)

• Comparability and EMS Unit Analysis

- EDP requirements.

- Unified accounting procedures.

- Reporting system.

• Cost Definition

- Total costs: cash vs. accrual bases.

- Unit cost related to volume of operations:
direct fixed costs and indirect fixed costs.

- Unit cost related to allocations of costs:
indirect variable and indirect fixed costs.

- Definitional basis of costs related to entity
survival: marginal costs, accounting costs,
economic costs.

• EMS Unit Evaluation

- Transfer pricing issues: performance vs.
"profit" criteria.

- Performance contracts: derivation of standards,
management forum for realistic expectations.

- EMS unit cost measurement: performance unit
selection, accounting and reporting system
factors, information processing factors,
performance contrasts - units and totals.

<u>Budgeting and Financial Planning</u>
(Objectives + Outline + References - Lecture + Seminar formats)

- Introduction: budgeting purposes, definition of terms.

- Objectives of a Budget Program

  - Management functions.

  - <u>Types</u> of budgets: appropriation, forecast, flexible budgets.

  - <u>Prerequisites</u> of a budget system: policy and objectives, organizational structure, chart of accounts, responsibility accounting.

- The Budget Process and Total Budget Program

- The Operating Budget

  - Statistical budget.

  - Expense budget.

  - Revenue budget.

- The Capital Budget: criteria, types of requests, budget components.

- The Cash Budget: receipts and disbursements.

- Budget Statements and Reports.

- Other Budget Considerations

  - The cost function and the budget.

  - <u>Long-range planning</u>: physical facilities, operations, PPBS, cost-effectiveness, cost-benefit analyses.

- Exercise: application of selected budgeting concepts via review of case examples.

  - <u>Case a</u>: demonstration of differences between actual costs and budgeted costs.

- Case b: exposure to variety of transactions and practice in preparing cash budget and income statement.

- Case c: demonstration of procedure for making capital budgeting decisions.

- Case d: demonstration of concept of present value.

• Exercise: application of budgeting concepts to multi-faceted budgeting problems.

- Case e: demonstration of relationships among operating, capital and cash budgets, and between balance and income statements.

- Case f: exploration of the variable budget and uses of budget reports.

- Case g: examination of the relation of various levels of management to the budget and budget director.

5 Budgeting Aspects of EMS Program Development
(Objectives + Outline of strategy + References - Seminar format)

• Medical Care Planning in a Small Urban Area: testing of priorities apparent in formulation of program and budget.

- Planning and design of community EMS system.

- Development of first-year budget and 5-year projections.

- Identification of expenditures, sources of income and income stability.

- Strategy determination for grant application.

• Community Hospital: financial planning and budgeting within institutions.

- Incorporation of EMS system components.

- Modification of an existing budget with fixed budgetary totals.

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- EMS Program: preparation of detailed budget for program plans implementation.

- EMS Program - Revised: demonstration of budget as means to an end and as mechanism of resource allocation.

  - Program modification.

  - Reallocation of resources.

  - Utilization of new resources.

  - Preparation of new budget.

- EMS Support at Federal Level: role-playing seminar examination of the appropriations process.

(U) CONTRACT AND GRANTS

Scope:
- Characteristics and distinctions between contracts and grants.

- Role of contracts and grants in supporting efforts in the public interest.

- Terms, principles and procedures in the development of contract and grant applications.

(1). Grants Administration
(Objectives + Outline + References - Lecture + Seminar formats)

- Concept of a Grant or Contract

  - The public interest.

  - Quid pro quo.

  - Accountability: contracts and grants.

  - RFP's.

  - Washington and role of regional offices.

  - Progress reports.

  - Renewals, etc.

- Grantsmanship

  - Explorations and intelligence.

  - Boiler-plate.

  - Project description.

  - Staffing and budget.

- The Site Visit

- Grant Award: implementation, performance monitoring, application for renewal.

- Exercise and Seminar: annotated outline of a grant application for an EMS systems project, meeting specified guideline constraints, followed by presentation and evaluation of grant applications.

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- Mock Site Visit: seminar exercise in proposal evaluation and critique.

  - Nature of project.

  - Critique of project plans.

  - Investigators.

  - Institution.

  - Institution/project resources.

  - Budget.

  - Recommendation: re approval.

(2) Preparation of Contracts and Grants
(Objectives + Outline + References - Lecture format)

- Introduction

  - Changes in focus of awards: evidence in contracts vs. awards, directed vs. undirected research.

  - Rationale for emphasis on contracts.

  - Definitions: contract and grant distinctions, characteristics, requirements.

- Federal Government Contracts

  - Major information sources: Commerce Business Daily, announcements, contract availability knowledge.

  - Requests for Proposals (RFP's): definition, elements, objectives, other approaches to requests, the "sole source" request.

  - Responding to an RFP: characteristics and general principles in preparing each major section of the proposal - the covering letter, technical proposal, business representations and detailed budget.

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- Deadlines and other constraints on proposal submissions.

- Review process: discussion of various approaches, details on a typical process - initial review, proposal ranking, site visit, final review.

- Notice of Award: procedures, characteristics, requirements and time frame.

- Unsuitable proposals: government procedures, rights of the rejected applicant.

• Federal Government Research Grants

- Major sources of information: announcements, personal contact, referral and follow-up process.

- General types: characteristics of the new, renewal and supplemental grant applications.

- Preparing a research grant application (new): application forms, assurances, detailed require- ments of Sections I and II of PHS 398, the research plan, checklist.

- Timing and deadlines.

- Scheduling of the review process.

- Review process: procedures and objectives of the study section and the National Advisory Council, learning about the decision.

(3) Contract Proposal Application Workshop
(Objectives + Content materials + Outline of strategy and assignments - Seminar format)

• Team Preparation of Technical Proposal: individual contributions to be assigned during team formation, working with an actual announcement and RFP, written section(s) to be provided by each team member, team effort to coordinate final proposal.

• Review and Evaluation: review committees established, selected proposals are reviewed and evaluated in accordance with actual RFP-specified criteria.

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